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ABSTRACT

Information is presented for individuals who are taking the second and third courses of the Computer Assisted Remedial Education (CARE) sequence. The entire CARE package is designed to help teachers learn to assist students in their classes who have learning problems. CARE 2/3, the courses for which this handbook was created, provide instruction in the use of diagnostic teaching with preshcoolers and primary graders. The handbook provides summaries of the computer-assisted instructional on-line material, and charts, illustrations, references, tables and other materials essential for the completion of the courses. The major sections of the handbook parallel those of the course itself and include: 1) child development; 2) identifying relevant characteristics of children; 3) the specification of goals and objectives; 4) instructional procedures; 5) the selection and retrieval of instructional procedures and materials; 6) the application of the diagnostic teaching model; 7) resources; and 8) day care. (PB)

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THE COMPUTER ASSISTED
INSTRUCTION LABORATORY
THE PENNSYLVANIA STATE
UNIVERSITY

Report No. R-54

Diagnostic Teaching of Preschool and Primary Children

Marjorie E. Ward
G. Phillip Cartwright
Carol A. Cartwright
Judith Campbell

IR 000 518

Note to accompany the Penn State Documents.

In order to have the entire collection of reports generated by the Computer Assisted Instruction Lab. at Penn State University included in the ERIC archives, the ERIC Clearinghouse on Educational Media and Technology was asked by Penn State to input the material. We are therefore including some documents which may be several years old. Also, so that our bibliographic information will conform with Penn State's, we have occasionally changed the title somewhat, or added information that may not be on the title page. Two of the documents in the CARE (Computer Assisted Remedial Education) collection were transferred to ERIC/EC to abstract. They are Report Number R-36 and Report Number R-60.

/ERIC/ER

ED 089793

COMPUTER ASSISTED REMEDIAL EDUCATION:

DIAGNOSTIC TEACHING OF PRESCHOOL AND PRIMARY CHILDREN

HANDBook for CARE 2

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CARE 2/3: DIAGNOSTIC TEACHING OF PRESCHOOL AND PRIMARY CHILDREN

Introduction I	Child Development II	Identifying Relevant Characteristics of Children III	Specification of Goals and Objectives IV	Instructional Procedures V	Selection and Retrieval of Instructional Procedures and Materials VI	Application of the Diagnostic Teaching Model VII	Resources VIII	Day Care IX	Summary X
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Introduction to CARE 2/3 1	Motor Development 5	Important Concepts About Educational Diagnosis 10	Task Analysis 13	Behavior Modification 15	Computer-Based Resource Units 19	Reading 23	Parent Education Programs 28	Application 30	
Summary of CARE 1 2	Intellectual Development 6	Systematic Observation 11		Open Education 16	Prescriptive Materials Retrieval System 20	Mathematics 24			
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PREFACE

CARE stands for Computer Assisted Remedial Education. The term Remedial Education was chosen to refer to the process of tracking down children's learning problems and doing something about those problems. The CARE courses are designed to train teachers, aides, child care workers, Child Development Associates and other interested persons to identify these learning problems and correct them through individualized instruction.

So far there are four courses in the CARE package. CARE 1, Identification of Handicapping Conditions in Children, has been designed especially for teachers. The major objective of the program is to help teachers find children in their classes who have some learning problems. CARE 2/3, the courses for which this handbook was designed, provide instruction in the use of diagnostic teaching. CARE 2 is Diagnostic Teaching of Preschool Children, or children aged 2-5 years, while CARE 3 is Diagnostic Teaching of Primary children, or children 5 to 8 years. CARE 2 and CARE 3 have been designed so that it is not necessary to have taken CARE 1 in order to do well in them. The fourth CARE course is Education of Visually Handicapped Children.

Two other courses in the CARE series have been proposed. They are CARE 5, Teaching Hearing Impaired Children, and CARE 6, Teaching Severely Retarded Children.

CARE 2 and CARE 3 are presented to students by means of CAI. Each student participating in the program works individually on the course at his own student station. Each station, which is linked to the computer, is comprised of the following components: 1) a small television screen (cathode ray tube [CRT]) for presenting the main content of the program, 2) a typewriter-like keyboard for responding and constructing answers to questions in the program, 3) a light pen for selecting answers on the face of the television screen (CRT), 4) an audio device for presenting sounds of children's speech patterns, supplemental direction, correct pronounciation of technical words, and remedial help for the student, and 5) a self-contained image projector and screen for displaying photographs, charts, diagrams, etc.

Each student takes an individualized version of the course as determined by the answers and responses he makes as he goes through the program. Responses are evaluated by the computer program and appropriate feedback is given immediately to the student.

This CARE 2/3 Handbook contains summaries of on-line CAI material, charts, illustrations, references, tables and other materials essential for the completion of the course. The student should keep the handbook with him at all times when he is at his station. Furthermore, each student should read ahead about two chapters before he goes to the computer terminal so that he is familiar with the material that will be presented.

All chapters are required for both CARE 2 and CARE 3 with the following exceptions: Chapters 21 and 23 are optional for CARE 2 but required for CARE 3; Chapters 8, 29, and 30 are optional for CARE 3 but required for CARE 2.

As the student progresses in CARE 2/3, at his own pace, the merit of the individualized instruction the course is promoting should become quite clear. In fact, a recent study of students enrolled in CARE 1 and students enrolled in the traditional course teaching the same material, found that the CARE students obtained a mean score 24 percent higher on the criterion test than did the traditional students.

Thus, CARE practices what it preaches as an extra help to teachers!

In an effort to assist the student in keeping track of where he is in the course, special charts have been prepared by the authors. These charts appear at the beginning of each chapter and section in the book. For this idea, the authors are indebted to Dr. John F. Vinsonhaler, Michigan State University.

ACKNOWLEDGMENTS

This handbook was developed to accompany two college level computer-assisted instruction courses in special education concepts. Funding for the development of these courses was provided by the Bureau of Education for the Handicapped, United States Office of Education. The development of these CAI courses took place under the aegis of the Penn State Computer Assisted Instruction Laboratory, Keith A. Hall, Director; and the Penn State Department of Special Education, Joseph L. French, Head.

Ultimate responsibility for the course content rests with the principle investigators, Professors G. Phillip Cartwright and Carol A. Cartwright. We share the responsibility for omission and other weaknesses of content, but reserve credit for the strengths of the program for the authors of the various chapters. A great number of persons contributed their time, energy, and ideas to the courses. The major authors are listed following this acknowledgment section. Also, some major input was received by consultants for this curriculum development project and a continuing project which is designed to put the courses to work in the field by means of mobile computer-assisted instruction laboratories. Professor John Salvia was in charge of evaluation devices and was ably assisted by Patricia Morrisey and Robert Algozzine.

Special acknowledgments are given to Mrs. Lucille Diehl. Mrs. Diehl was the chief programmer and technical coordinator of many of the operations required in the elaborate computer-assisted instruction course development process. Mrs. Diehl, along with Lynne Yeaton, and Bonnie Shea, interpreted author-prepared material and completed the coding and computer programming. Dr. Karl G. Borman was in charge of technical support and worked with Mrs. Diehl to assure the smooth functioning of the technical aspects of the project.

In addition, acknowledgment is given to the following persons: Leslye Bloom and James Campbell, image production and handbook illustrations; Robert Chrenowski, photography; Charles Guyer, audio production; Terry Bahn, computer operation; Frank Wilson, Nancy Miller, Doug Flodin, Croy Pitzer, and David Dimmick for audio narration; and Diane Bloom, Janet Carroll, Alice Klinger, Randy Ripka, and Sandy Smith for clerical support.

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October, 1973

CARE 2/3 AUTHORS

Chapter	Title	Author
1	Introduction to CARE 2/3	C. Cartwright
2	Summary of CARE 1	M. Villwock
3	Diagnostic Teaching Model	T. Dangel
4	Important Concepts of Child Development	V. Johnson
5	Motor Development	V. Johnson
6	Intellectual Development	V. Johnson
7	Social-Emotional Development	V. Johnson
8	Language Development – Infancy to Age 5	V. Johnson
9	Important Concepts about Educational Evaluation	J. Salvia
10	Important Concepts about Educational Diagnosis	S. Vitello
11	Systematic Observation	L. Ribble
12	Formulating Instructional Objectives	S. Swidzinski
13	Task Analysis	M. Villwock
14	Factors to be Considered in Selecting Instructional Procedures	D. Deck
15	Behavior Modification	S. Swidzinski/ J. Seaver
16	Open Education	J. Seaver
17	Comparison of Open Education and Behavior Modification	J. Seaver
18	IMC/RMC Network	J. Moyer
19	Computer-Based Resource Units	J. Moyer
20	Prescriptive Materials Retrieval System	J. Moyer
21	Fountain Valley	J. Moyer
22	Language Development	F. Lamberts
23	Reading	M. Dupuis/R. Thompson
24	Mathematics	S. Vitello
25	Social and Emotional Development	C. Spinazola
26	Motor Development	V. Johnson
27	Resource Persons and Their Roles/Referral and Follow-up Procedures	C. Spinazola
28	Parent Education Programs	J. Seaver
29	Day Care – Theory	J. Seaver
30	Day Care – Application	J. Seaver
31	Summary	C. Cartwright

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PART I

INTRODUCTION

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

INTRODUCTION I   II   III   IV   V   VI   VII   VIII   IX   X

- CHAPTER 1 INTRODUCTION TO CARE 2/3
- CHAPTER 2. SUMMARY OF CARE 1
- CHAPTER 3. DIAGNOSTIC TEACHING MODEL

PREFACE

The three chapters in Part I serve as an introduction to the remainder of the Handbook. The Preface to the Handbook, therefore, serves as the Preface to Part I.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

INTRODUCTION II III IV V VI VII VIII IX X

CHAPTER 1. INTRODUCTION TO CARE 2/3 includes a description of individualized learning and teaching through branching and diagnostic teaching model.

CHAPTER 2. SUMMARY OF CARE 1

CHAPTER 3. DIAGNOSTIC TEACHING MODEL

CHAPTER ONE

INTRODUCTION TO CARE 2/3

The major purposes of this chapter are three-fold: 1) to describe the highly individualized tutorial mode of instruction used for CARE 2/3 via CAI; 2) to describe mastery learning and illustrate the use of the mastery model through the branching program developed for CARE 2/3 via CAI, and 3) to present the CARE series, indicating the role of CARE 2/3 within the series.

The concept of individualization has its roots in the earliest history of education. Formalized learning began with one man, the tutor, teaching another man, the student. This one to one ratio made it possible for the tutor to identify small problems in the student before they became serious learning impediments. He was able to move fast if his pupil did well, or slow down if his pupil had problems.

As the population expanded, individualized instruction was replaced by group instruction. Though more children were being educated, many learning problems were going undetected and individual differences were being neglected.

CAI and CARE represent a return to individualization through their unique branching programs. They are set up to insure that each student gets a slightly different version of the course according to his needs. Under this program no one can fail. If the student has trouble understanding a certain concept, he is branched to different examples and definitions until the idea is grasped.

The "brand" of individualized instruction taught to students in CARE 2/3 is called Diagnostic Teaching, and has three major purposes. First of all, it is designed to prevent learning problems from ever developing in children. However, if learning problems already exist, it helps spot them early and do something about them for the children. Finally, it helps enhance or improve the learning assets of children.

Chapter 3 provides a detailed explanation of the Diagnostic Teaching Model which is used throughout the course. Every part of the course is somehow related to this model.

The Diagnostic Teaching Model and Objectives

Individuals who complete either CARE 2 or CARE 3 should be able to modify children's educational experiences by doing the following:

1. Identify characteristics of individual children that indicate special teaching or management procedures are required;
2. Specify relevant educational objectives for individual children;
3. Select techniques for effective classroom management;
4. Choose and use specialized teaching strategies for reaching specific objectives for children with varying behavioral and learning characteristics;
5. Choose and use special materials in association with specific strategies;
6. Identify and use appropriate evaluation procedures;
7. Draw upon existing sources of information regarding specialized strategies and materials; and,
8. Consult with available resource persons for assistance when needed.

These objectives are directly related with the flowchart in Chapter 3 on page 19.

Mainstreaming Children With Problems

An idea called "mainstreaming" has become very important during the past several years. In brief, mainstreaming refers to the integration of children with learning and behavioral problems into regular class situations. It was proposed since many research studies indicated that children who were segregated into special classes were not learning any better than their counterparts who had remained in regular class situations. In fact, some of the research studies suggested that the children with problems who remained in the regular class situations were actually better off because their social and emotional development was not adversely influenced by being segregated into a special class. For these and other reasons, educators have proposed mainstreaming as a way of better dealing with children who are experiencing problems. Because of mainstreaming, individuals who have not had special experiences in dealing with children who have learning problems are being called upon to work with these children more and more frequently. The courses in the CARE series are designed to help people who have not been previously trained in special education to adequately deal with children who have learning problems. The remainder of this handbook and the on-line materials that you will complete during the course are intended to help you individualize instruction and enable almost all children to be in the "mainstream" of education.

REFERENCES

Chapter 1

Introduction to CARE 2/3

BURELLO, L. C., TRACY, M. L. and SCHULTZ, E. W. Special education as experimental education: A new conceptualization. *Exceptional Children*, 1973, 40, 29-34

CARTWRIGHT, G. P. and CARTWRIGHT, Carol A. A computer-assisted instruction course in the early identification of handicapped children. *Journal of Teacher Education*, XXIV, 2, Summer 1973, 128-134.

CARTWRIGHT, G. P. and Cartwright Carol A. Gilding the Lilly: Comments on the training based model for special education. *Exceptional Children*, 1972, 39, 231-234

CARTWRIGHT, G. P., CARTWRIGHT, Carol A., and YSSELDYKE, J. E. Two decision models: Identification and diagnostic teaching of handicapped children in the regular classroom. *Psychology in the Schools*, January 1973, X, (1), 4-11

DENO, Evelyn N. (Ed.) *Instructional alternatives for exceptional children*. Arlington, Va.: Council for Exceptional Children, 1973

DUNN, L. M. Special education for the mildly retarded—Is much of it justifiable? *Exceptional Children*, 1968, 35, 5-22

LILLY, M. S. Special education: A teapot in a tempest. *Exceptional Children*, 1970, 36, 43-49

LILLY, M. S. A training based model for special education. *Exceptional Children*, 1971, 37, 745-759

MARTIN, E. W. Individualism and behaviorism as future trends in educating handicapped children. *Exceptional Children*, 1972, 38, 517-525

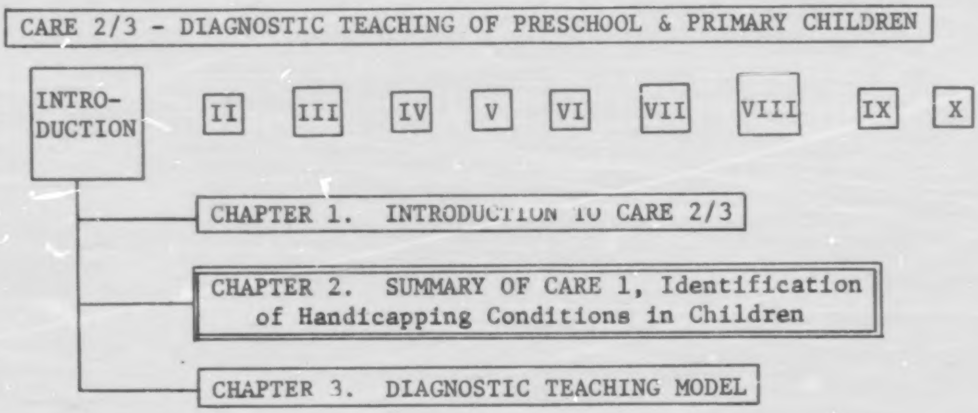
REYNOLDS, M. C. and BALOW, B. Categories and variables in special education. *Exceptional Children*, 1972, 38, 357-366

REYNOLDS, M. C. and DAVIS, M. C. (Eds.) *Exceptional children in regular classrooms*. Minneapolis: University of Minnesota, Department of Audio-Visual Extension, 1971

SCHWARTZ, L. A. A clinical teacher model for interrelated areas of special education. Innovative non-categorical and interrelated projects in the education of the handicapped. Proceedings of a special study institute, Florida State University Department of Rehabilitative Sciences, Tallahassee, Florida, 1972.

SMITH, W. L. Ending isolation of the handicapped. *American Education*, 7, 1971, 29-33.

NOTES


CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN
INTRO-DUCTION
II
III
IV
V
VI
VII
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IX
X
CHAPTER 1. INTRODUCTION TO CARE 2/3
CHAPTER 2. SUMMARY OF CARE 1, Identification of Handicapping Conditions in Children
CHAPTER 3. DIAGNOSTIC TEACHING MODEL

CHAPTER TWO

SUMMARY OF CARE 1

The CARE 2/3 courses are designed so that they build on CARE 1 (Identification of Handicapping Conditions in Children) This chapter is a brief reiteration of basic concepts included in CARE 1 It is appropriate for those who have taken CARE 1 as well as for those who have not because of the high degree of branching used in the chapter Students who demonstrate that they are already familiar with the concepts skip large sections of explanation and examples

In order to develop the most effective teaching strategy for each child in the classroom, a teacher must be able to identify not only the existing problems of each child but also any potential problems that are likely to cause difficulty in the future

CARE 1 emphasizes the necessity of identifying the special learning needs of children as *early* as possible If special needs are dealt with early, they can be prevented from becoming serious problems If not detected, the effects are cumulative and the child will fall further and further behind his normal peers.

Information Processing

A person interacts with his environment by receiving stimuli through the sensory input channels, processing this stimuli (information from the environment), and then making responses based upon this sensory input plus the information already stored in his brain

Inferences about the inner conditions or processes of others are made on the basis of their *behaviors* (their motor or verbal responses) because *behaviors* can be observed

Since vocal or motor responses (behaviors) are based upon the information received through the input channels and upon the processing of this information in the brain, it follows that problems in one or both of these channels will be reflected in the output channel

Behavior is Important

When identifying the problems or potential problems of the children in a classroom, it is most helpful to think in terms of the behaviors displayed by the child rather than trying to describe the underlying condition

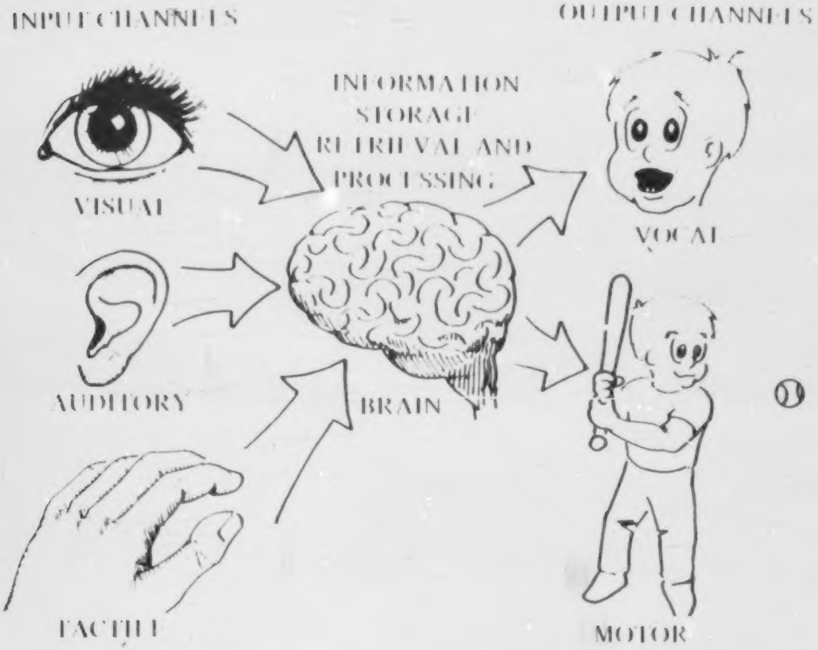

INPUT CHANNELS
OUTPUT CHANNELS
INFORMATION STORAGE RETRIEVAL AND PROCESSING
VISUAL
AUDITORY
TACTILE
BRAIN
VOCAL
MOTOR

Plate 2.1 INFORMATION PROCESSING MODEL

Depending on the particular problem and on the behaviors displayed by the child, it may be relatively easy to determine the source of a child's problem or it may be very difficult. The best approach is to gather as much behavioral information about the child as possible before making an inference about the underlying source of the problem.

The implications of the following three statements must be kept in mind:

1. Children who display the *same* behaviors may have very *different* problems.
2. Children who display very *different* behaviors may have the *same* problem.
3. A child's disability in one area of functioning may reduce his effectiveness and cause problems in other areas of functioning.

Summary

1. Inferences about children's problems must be based on *observable behaviors.*
2. The more observable behaviors upon which an inference is based, the better – *Don't jump to conclusions.*
3. Children's disabilities and problems are interrelated. Concentrate on describing behaviors and *avoid labeling.*

REFERENCES

Chapter 2

Summary of CARE 1

Refer to References for Chapter 1

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

Intro. I II III IV V VI VII VIII IX X

- CHAPTER 1. INTRODUCTION TO CARE 2/3
- CHAPTER 2. SUMMARY OF CARE 1
- CHAPTER 3. DIAGNOSTIC TEACHING MODEL
  A scheme for planning, carrying out, and evaluating a program of diagnostic teaching.
  - The teacher takes steps to specify, select procedures, select material, try out, and evaluate.
  - The teacher must decide if the relevant characteristics identified, goals, strategy, and materials
    necessary to try again or seek outside help.
  - This sequence creates systematic behavior in the classroom.

CHAPTER THREE

DIAGNOSTIC TEACHING MODEL

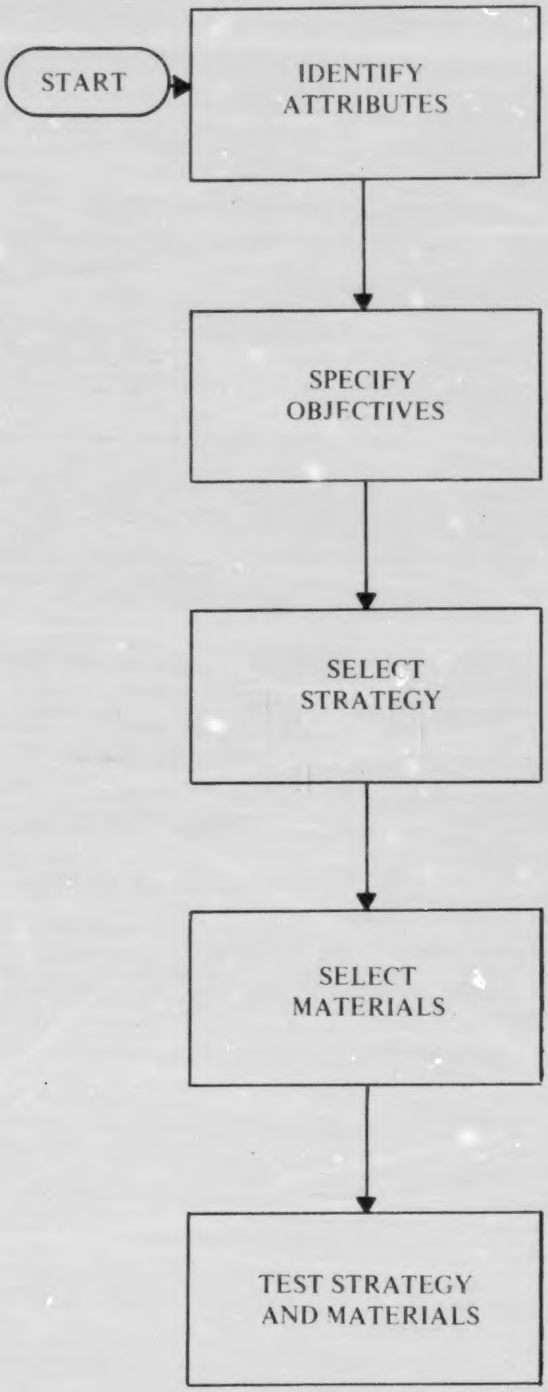
The Diagnostic Teaching Model describes a scheme for planning, implementing and evaluating a program of diagnostic teaching. Diagnostic teaching focuses attention on the differences within each individual. By treating the child as an individual with specific and potential learning abilities, the teacher can be more effective in helping each child develop. The Diagnostic Teaching Model has these purposes.

1. to prevent learning problems
2. to correct existing problems
3. to enhance learning assets

The flowchart shown in its entirety on page 19 illustrates one way to develop a diagnostic teaching program for a child. Each of the rectangular shapes represents a step in the program. Each of the diamond shapes represents a decision which must be made in using the program. The arrows show the direction the teacher should follow in planning and executing the steps and decisions of the Diagnostic Teaching Model.

This flowchart is used throughout the course. Everything that is included in this course is related to one or several of the **STEPS,** the **DECISIONS** or the **SEQUENCE** of actions involved in the diagnostic teaching process.

The first step in the Diagnostic Teaching Model involves identifying the relevant attributes or characteristics of the child. Relevant attributes are those which are related to the specific behavior of interest to the teacher. For example, a teacher notices that a child is not interacting with the other children, she might identify relevant behavior by 1) observing him for a number of days to see which situations prompt this behavior, 2) recording frequency of the behavior, and 3) observing the other children's behaviors toward the child.


START
IDENTIFY ATTRIBUTES
SPECIFY OBJECTIVES
SELECT STRATEGY
SELECT MATERIALS
TEST STRATEGY AND MATERIALS

There are several things to remember when *identifying attributes.*

1. The more information known about the child, the greater is the probability that all of the child's relevant attributes will be identified.
2. Some attributes relevant to a learning situation may not be obviously related. For example, an emotional problem may be interferring with a child's reading.
3. The search is begun by looking for the relevant characteristics which seem to be most logically related to the situation. However, other areas must be explored until all information is collected

The second step is *specifying teaching goals.* Simply stated, this means stating what the child should be able to do after he has completed his learning experience.

Objectives should be carefully selected to meet certain rules.

1. Objectives should be stated in terms of observable behavior.
2. Objectives should meet the child's needs.
3. Objectives should be stated in simple, small steps.
4. Objectives should build to a larger goal

The next step in the model is the *selection of the instructional strategy* and management procedures. These strategies are the activities chosen by the teacher to lead the child to the stated objectives.

Several factors should be considered when choosing a strategy.

1. The strategy should begin at the child s present level.
2. The strategy should insure the objectives.
3. The strategy should stimulate the child
4. The strategy should proceed in small steps
5. The strategy should be a match between the relevant attributes of the child and the desired objectives

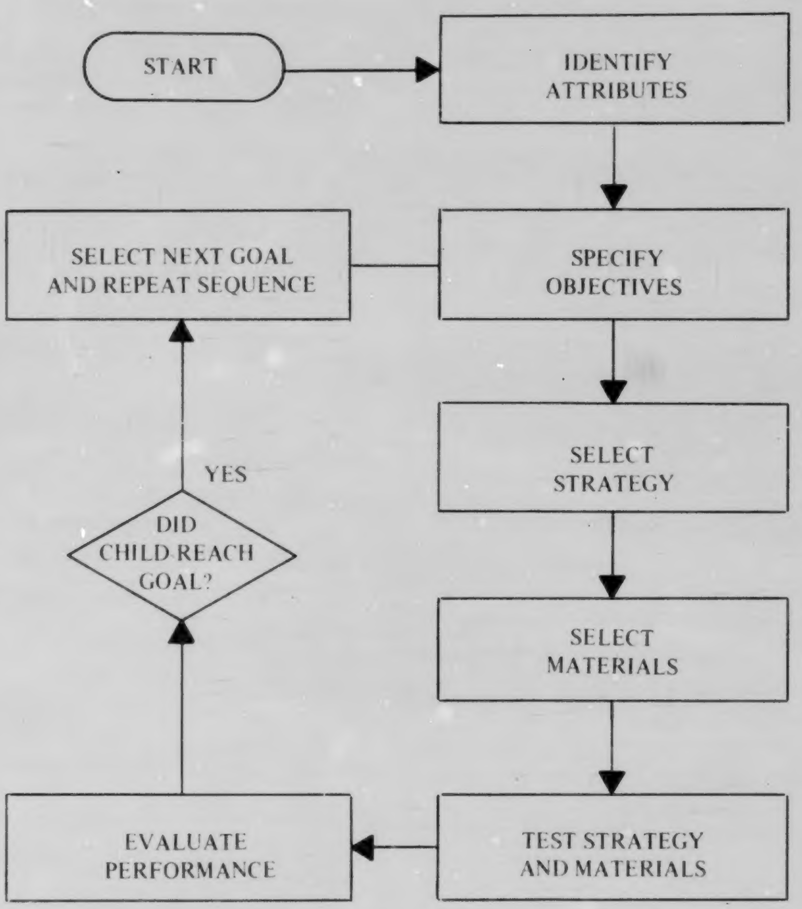
The next step in the model is making and/or *selecting appropriate materials* to reach the stated objective The materials selected by the teacher are the actual materials the student will use Often the teacher has a large variety of resources from which to choose – books, films, manipulative objects, etc. However, the teacher will sometimes have to develop his own materials.

> The diagnostic teaching program is ready to be tried with the child when the relevant attributes are identified and the objective, strategy and materials have been selected

When the program has been completed by the child, the teacher must evaluate whether or not the objective has been reached. There is no magic formula to tell the teacher exactly which objective to specify or exactly which teaching methods and materials to select. Therefore, the "test" for a diagnostic teaching program is to try it with the child to see if it works.

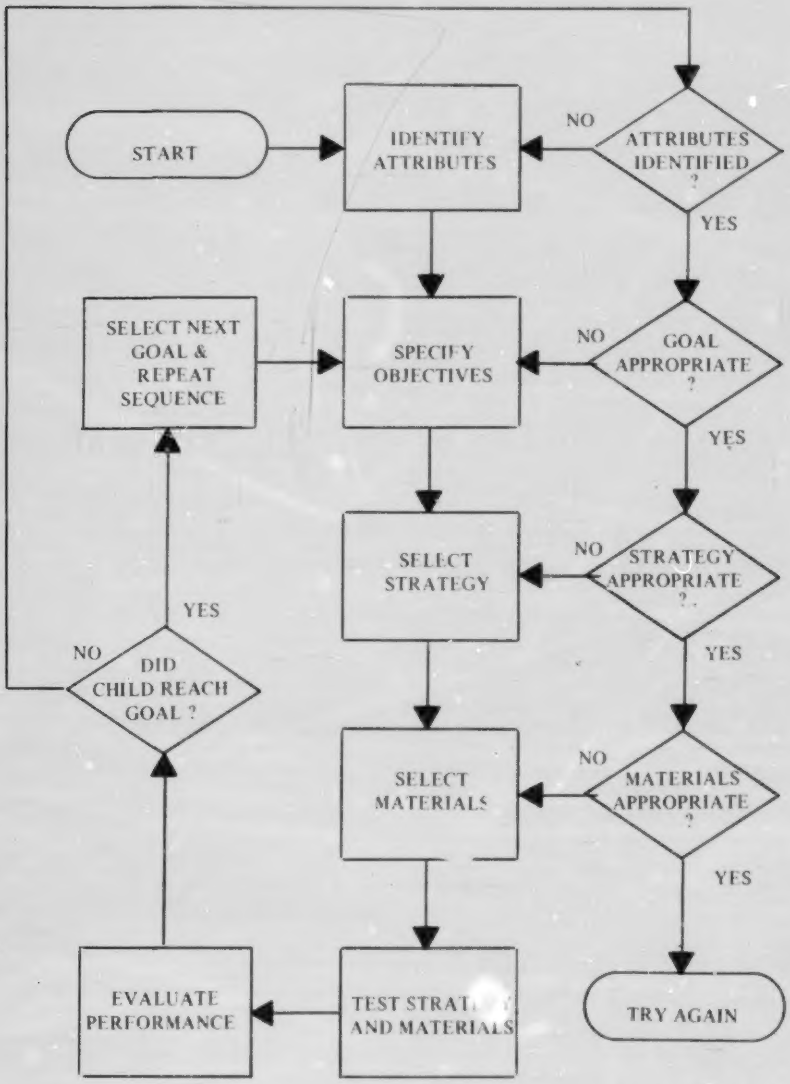
The objective is stated in terms of observable behavior. The teacher then, can easily determine if the child's performance matches the performances specified in the objective. This type of evaluation is called *criterion referenced evaluation.*

If the child has reached the stated objective, the teacher specifies the next objective and goes through the sequence again. This means that a new strategy, and new materials will be selected to reach a new objective.


START
IDENTIFY ATTRIBUTES
SELECT NEXT GOAL AND REPEAT SEQUENCE
SPECIFY OBJECTIVES
SELECT STRATEGY
YES
DID CHILD REACH GOAL?
SELECT MATERIALS
EVALUATE PERFORMANCE
TEST STRATEGY AND MATERIALS

If the child does not reach this specified objective, the teacher must analyze each step of the program, asking questions at each step of the model.

After this thorough examination, if the child fails to reach the specified goal a second time, the teacher should seek help from a resource person, such as a guidance counselor, supervisor or specialist in that field to determine why the program failed.


START
IDENTIFY ATTRIBUTES
NO
ATTRIBUTES IDENTIFIED ?
YES
SELECT NEXT GOAL & REPEAT SEQUENCE
SPECIFY OBJECTIVES
NO
GOAL APPROPRIATE ?
YES
SELECT STRATEGY
NO
STRATEGY APPROPRIATE ?
YES
YES
NO
DID CHILD REACH GOAL ?
SELECT MATERIALS
NO
MATERIALS APPROPRIATE ?
YES
EVALUATE PERFORMANCE
TEST STRATEGY AND MATERIALS
TRY AGAIN

Summary

The purpose of this chapter was to introduce the Decision Model for Diagnostic Teaching. Each of the steps and decisions presented in this lesson will be dealt with in more detail as the course progresses.

Many of the steps in this model for diagnostic teaching are activities which are normally used in the classroom. An important point is that in this model these activities occur in a definite sequence. Note the arrows in the flowcharts. These arrows indicate that the steps follow one another in a definite sequence. It is this characteristic of the decision model that helps teachers to behave systematically in the classroom.

REFERENCES

Chapter 3

Diagnostic Teaching Model

Refer to References for Chapter 1

NOTES

PART II

CHILD DEVELOPMENT

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I

Child Development II

- CHAPTER 4. IMPORTANT CONCEPTS OF CHILD DEVELOPMENT
- CHAPTER 5. MOTOR DEVELOPMENT
- CHAPTER 6. INTELLECTUAL DEVELOPMENT
- CHAPTER 7. SOCIAL-EMOTIONAL DEVELOPMENT
- CHAPTER 8. LANGUAGE DEVELOPMENT

III

IV

V

VI

VII

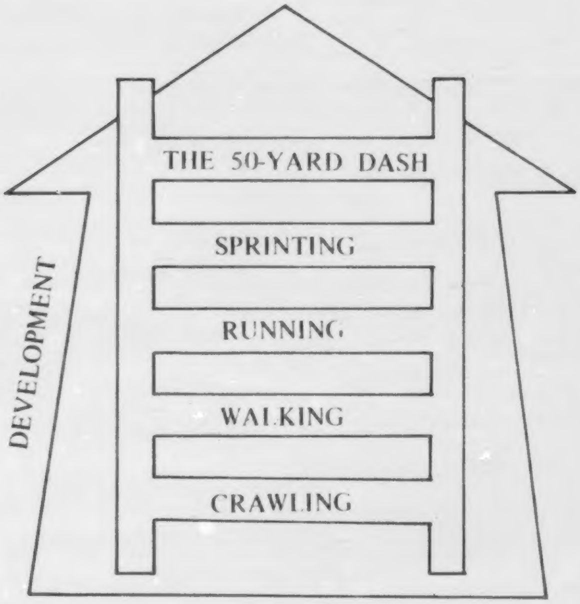
VIII

IX

X

PREFACE TO CHAPTERS FOUR, FIVE, SIX, SEVEN AND EIGHT

When attention is given to the development of skills in one particular area of behavior, the concept of developmental sequence becomes especially relevant. A developmental sequence is the order in which new skills or behaviors are learned. Simple skills must be mastered before one can move on to the more advanced skills. An example of a motor sequence is shown below.


THE 50-YARD DASH
SPRINTING
RUNNING
WALKING
CRAWLING
DEVELOPMENT

EXAMPLE OF DEVELOPMENTAL SEQUENCE

The *rate* at which children move through a sequence will vary considerably from child to child. Some will master all the skills easily; others will progress at a slower rate. Or the same child will speed through some skills and plod along to master others. But the *order* in which the skills are learned will be the same for all children.

A Footnote on Learning

Throughout all the chapters on normal child development, the term learning will refer to all instances when children pick up new information, skills or behaviors. The term will apply to three general types of situations:

1. *Where the child picks up new things by being told about them.* For example, during a geography lesson the teacher tells the class about life in India. So the children learn information about India by being told about it. This type of learning will sometimes be referred to as learning through verbal instruction.

2. *Where the child picks up a new behavior by watching the behavior of someone else and copying it.* For example, a child may pick up the behavior of swearing when he is angry because he has watched his father swear when his father is angry. So he learns to swear by copying his father's behavior.

3. *Where the child picks up new information or skills through his own direct experience.* For example, if a child puts his hand on the flame of a gas burner, he discovers that the burner is painfully hot and something to avoid. So he learns an important piece of information about gas burners through his own experience with them.

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CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

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- CHAPTER 4. IMPORTANT CONCEPTS OF CHILD DEVELOPMENT are used as a frame of reference by which normal child development can be assessed.
  - Behavior changes associated with goals which are pertinent to adult behaviors are considered child development.
  - Development is examined by studying the products and processes.
  - The three major developmental concepts are differentiation, individual differences, and socialization.
- CHAPTER 5. MOTOR DEVELOPMENT
- CHAPTER 6. INTELLECTUAL DEVELOPMENT
- CHAPTER 7. SOCIAL-EMOTIONAL DEVELOPMENT
- CHAPTER 8. LANGUAGE DEVELOPMENT

CHAPTER FOUR

IMPORTANT CONCEPTS OF CHILD DEVELOPMENT

The principles and ideas of child development can be used in teaching as a frame of reference or a yardstick by which normal child development can be assessed. It is assumed that if a teacher possesses such information, he will be in a better position to judge whether or not a particular behavior he observes in his classroom is appropriate for a child that age, and in turn whether or not the child requires special attention.

Development is generally regarded as a *change* in behavior. However, only behavior changes which are associated with a *goal* are true examples of development. Since the ultimate goal of normal child development is adulthood, only those behavior changes associated with goals which are pertinent to adult behaviors are considered *child development*.

If a child's behavior changes so that behaviors typically associated with a younger, more immature child are exhibited, the behavior change is called *regressive*. A child's behavior would be regressive if he changed from showing a relatively mature form of aggression (verbal) to a more immature form (physical).

DEVELOPMENT = CHANGE with a GOAL

Changes in behavior associated with developmental goals are concerned with:

1. *What* has changed
2. *Means* by which change came about

> For example: A car is driven 20 miles. What has changed about the car is that it is now 20 miles from where it was before. But the means by which the car was able to move those miles was its internal combustion engine which turned the wheels. This example considers *what* has changed and the *means* by which the change came about.

Process and Product

A similar distinction can be made with development. What has changed (referred to as the *products* of development) or the means by which the change happened (called the *processes* of development) can be examined.

Products. Observable behaviors are products.

Processes. The internal growth and learning mechanisms by which the child becomes able to show the observable products are the processes of development.

Because processes are going on inside the child and cannot be directly observed, it can only be inferred that a process (learning or growth) has been operating by comparing the new product (behavior) with the old product (behavior).

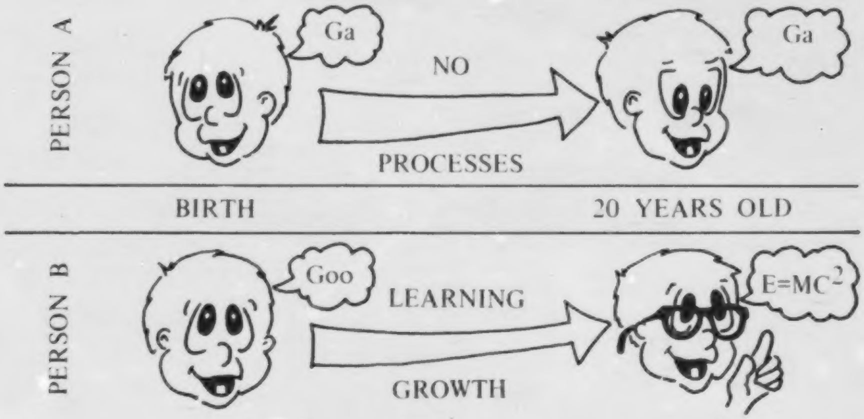

Plate 4.1 PROCESS AND PRODUCT

Products are observable. Since processes are internal and therefore not directly observable, statements of process make little sense without being linked to products. When processes are linked to products, the teacher is able to evaluate the development of processes in children.

Developmental Ideas

Regardless of the type of behavioral development studied (language, cognition, physical or social-emotional), there are certain developmental ideas that apply from birth to maturity. In a sense, these ideas are the "glue" that holds together all the bits and pieces of information about behavior changes.

Applying general developmental ideas to specific instances of development also helps a person to view a child's development as a coordinated and purposeful effort to transform the infant into an adult, rather than as a collection of related behavior changes.

Differentiation. Differentiation starts with something simple and results in something complex that has many distinguishable and refined parts.

Differentiation continues throughout a person's life, although it is less noticeable in adults than in children. Consequently, as a child gets older his behaviors become more numerous, refined, and complex. For example, an infant's first steps are undifferentiated behavior because they are the only responses he can make to get around in an upright position. His behavior becomes differentiated when he is able to walk, run, hop, skip, etc.

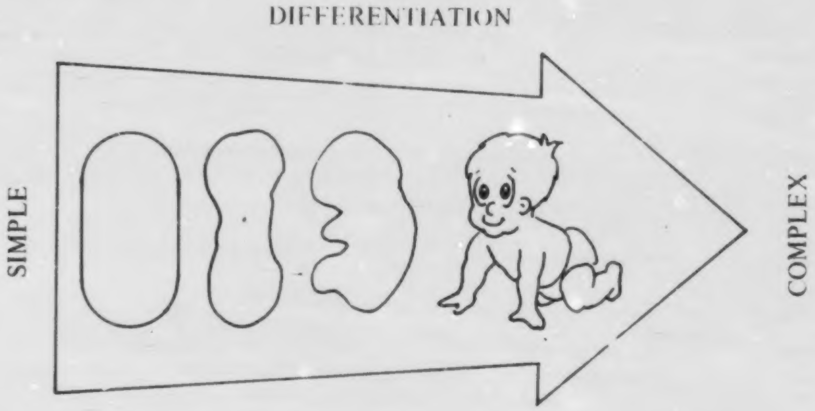

Plate 4.2 SYMBOLIZATION OF DIFFERENTIATION

Individual differences. Each person is unique. Developing children become increasingly different from one another. There are two degrees of individuality. Limited individuality occurs when the number of behaviors a person has an opportunity to differ on is limited. Great individuality occurs when the number of behaviors is not limited.

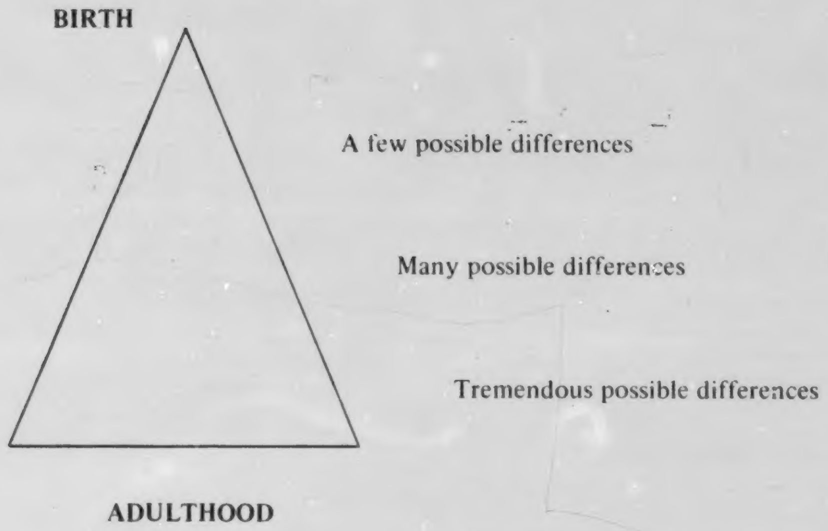
BIRTH
A few possible differences
Many possible differences
Tremendous possible differences
ADULTHOOD

Plate 4.3

TREND OF INDIVIDUAL DIFFERENCES

1. Newborns are different from each other (genetic differences).
2. As children grow older, individuality increases since
   a. there are more behaviors and, therefore, more opportunity to show differences,
   b. children develop at varying rates, and
   c. no one grows up in exactly the same environment as anyone else.

Socialization. Learning to conform to the rules of society so that behavior is predictable and acceptable is called socialization. Young children do not automatically know what is acceptable in their society; they must learn acceptable behaviors from the people around them. Incredible as it may seem, almost every skill, attitude, and behavior human beings show that make them different from higher animals is a product of socialization.

Plate 4.4

ITEMS FROM THE
VINELAND SOCIAL MATURITY SCALE

Age	Behavior
2	Asks to go toilet
	Initiates own play activities
	Removes coat or dress, puts on same unassisted
	Eats with fork
	Gets drink unassisted
	Dries own hands
	Avoids simple hazards
	Cuts with scissors
3	Relates experiences
	Walks down stairs one step per tred
	Buttons coat or dress
	Helps at little household tasks
	"Performs" for others
	Washes hands unaided
	Cares for self at toilet
4	Washes face unassisted
	Goes about neighborhood unattended
	Dresses self except tying
5	Uses pencil or crayon for drawing
	Plays competitive exercise games
	Uses skates, sled, wagon
	Prints simple words
	Plays simple table games
	Is trusted with money
	Goes to school unattended

From:
DOLL, E. A. *Vineland Social Maturity Scale: Condensed Manual of Directions,* Circle Pines, Minn.: American Guidance Service, Inc., 1965, pp. 4-5.

Socialization includes one special idea that deserves attention in and of itself as it illustrates how socialization effects intellectual development as well as language, social interaction, etc This idea of development is called *social point of view*.

Preschoolers don't have much of a social point of view. They can't feel what it is like to be in someone else's shoes or figure out what things must look like to someone else They don't realize that not everyone else sees things the way they do. Increased interaction will eventually force the child to take other people's points of view into account.

This ability to see another person's point of view allows human beings to live together. This is the ultimate goal of socialization. The primary agents of socialization in our society are a child's parents and his peers. Language, basic self-help skills, sex-appropriate roles and self-control are primarily learned from the parents. Peers are basically responsible for the learning of cooperation skills.

Summary

This brief introduction to the concept of developmental change and to the general developmental ideas of differentiation, individual differences and socialization is designed to provide the teacher with the conceptual tools needed to unify the specific information given in the following sections.

REFERENCES

Chapter 4

Important Concepts of Child Development

BANDURA, A. and WALTERS, R. *Social learning and personality development*. New York: Holt, Rinehart and Winston, 1963.

BAYLEY, N. Individual patterns of development. In B. C. Mills (Ed.), *Understanding the Young Child and His Curriculum: Selected Readings*, New York: Macmillan Co., 1972, 34-65.

BLOOM, B. *Stability and change in human characteristics*. New York: John Wiley and Sons, 1964.

HARRIS, D. B. *The concept of development*. Minneapolis, Minn: University of Minnesota Press, 1957.

LANGER, J. *Theories of development*. New York: Holt, Rinehart, and Winston, 1969.

LEWIN, K. Behavior and development as a function of the total situation. In L. Carmichael (Ed.), *Manual of Child Psychology*, 2nd edition, New York: John Wiley and Sons, 1954, 918-970.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

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- CHAPTER 4. IMPORTANT CONCEPTS OF CHILD DEVELOPMENT
- CHAPTER 5. MOTOR DEVELOPMENT is learning to control muscles of the body so that the movements of the body can be controlled.
  - There are two major types of motor skills: GROSS and FINE.
  - From birth to five the child is developing the basic or fundamental skills.
  - At the primary level motor achievement centers around the application of fundamental skills to new situations and the increase of strength and speed.
- CHAPTER 6. INTELLECTUAL DEVELOPMENT
- CHAPTER 7. SOCIAL-EMOTIONAL DEVELOPMENT
- CHAPTER 8. LANGUAGE DEVELOPMENT

CHAPTER FIVE

MOTOR DEVELOPMENT

The term motor describes any voluntary movement a person decides to make with any part of his body. MOTOR DEVELOPMENT involves learning to control muscles so that the movements of the body can be controlled.

A motor behavior has two characteristics: muscle movement and a conscious control. Conscious control of muscles is not something a person is born with; a child must *learn* to control his muscle movements.

Motor Behaviors

There are two major types of motor skills: GROSS and FINE. Gross motor skills or behaviors involve movement of the whole body, particularly arms and legs, in activities like throwing, catching, running and jumping.

During the years from birth to five, the child is developing what are called the basic or fundamental skills. On the gross motor side, these fundamental skills include running, kicking, jumping, hopping, skipping, throwing and catching. The selection of items from the *Denver Developmental Screening Test* (Plate 5.1) represents a sequence of these gross motor skills.

The sequence of gross motor development outlined in the behaviors in Plate 5.2 is an example of differentiation – the moving from one simple skill to many complex skills.

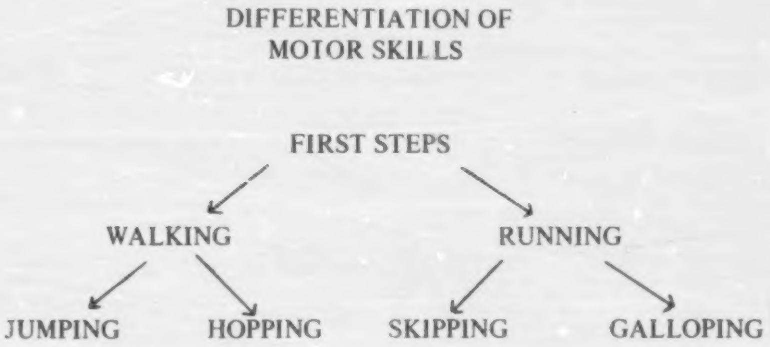

Plate 5.2 DIFFERENTIATION OF MOTOR SKILLS

Gross Motor Activities

Item	25 Percent	90 Percent
Kicks ball forward	15.0 mo.	2.0 yr.
Throws ball overhand	14.9 mo.	2.6 yr.
Balances on 1 foot 1 second	21.7 mo.	3.2 yr.
Jumps in place	20.5 mo.	3.0 yr.
Pedals trike	21.0 mo.	3.0 yr.
Broad jump	2.0 yr.	3.2 yr.
Balances on 1 foot 5 seconds	2.6 yr.	4.3 yr.
Balances on 1 foot 10 seconds	3.0 yr.	5.9 yr.
Hops on 1 foot	3.0 yr.	4.9 yr.
Catches bounced ball	3.5 yr.	5.5 yr.
Heel-to-toe walk	3.3 yr.	5.0 yr.
Backward heel-toe	3.9 yr.	6.3 yr.

Plate 5.1. EXAMPLE OF GROSS MOTOR ITEMS FROM DENVER DEVELOPMENTAL SCREENING TEST

Adapted from

FRANKENBURG, K. and DODDS, J. B. The Denver Developmental Screening Test. *The Journal of Pediatrics,* Vol. 71, 1967, pp. 181-191.

In Plates 5.1 and 5.3, the ages listed in the column labeled 25 Percent represent the ages at which about one out of four children can perform the activity. The ages in the column labeled 90 Percent tell when most children can perform the activity. For example, "Kicks ball forward" is a behavior which some children can manage at 15 months and which most, children can manage at 2 years. These ages roughly represent the upper and lower limits of an age span within which most children learn the skill. So, for "kicks ball forward," 15 months represents the lower limit of age span for that skill and 2 years represents the upper limit.

The time spans between when a few children have learned the skill and when almost all children have learned the skill become increasingly long as the children grow older and skills become harder. This increasing length represents individuality or individual differences, one of the general developmental ideas discussed in Chapter 4.

Fine motor skills or behaviors involve movement of the fingers and hands in activities like grasping objects, drawing, using eating utensils and handling tools. The fundamental fine motor skills are represented by such activities as tower-building, copying designs, and free-hand drawing (Plate 5.3).

Once these fundamental skills are mastered, the primary child can begin to apply them to more complicated tasks such as games and sports (gross motor) and printing and writing (fine motor).

In addition, primary children are improving on the strength and speed with which they can perform the fundamental skills. The preschooler masters the important movements involved in the various skills, but he is unlikely to be able to do them with much speed or strength.

In gross motor skills, primary children show increases in their running speed, the height or distance they jump, and the distance they can throw balls. Improvement in strength and speed is less easy to see in fine motor skills. An increase in printing and writing speed through the first three grades in school, however, is quite evident because the children are not only mastering the movements of writing but are also increasing the strength of their fingers.

In general, the motor achievements of the primary years are the application of fundamental skills to new situations and the increase of strength and speed.

Fine Motor Activities

Item	25 Percent	90 Percent
Dumps raisin from bottle – spontaneous	12.7 mo.	2.0 yr.
Dumps raisin from bottle – demonstrative	13.7 mo.	3.0 yr.
Tower of 4 cubes	15.5 mo.	2.2 yr.
Imitates vertical line within 30 degrees	18.4 mo.	2.2 yr.
Tower of 8 cubes	21.0 mo.	3.4 yr.
Copies circle	2.2 yr.	3.3 yr.
Imitates bridge	2.3 yr.	3.4 yr.
Copies +	2.9 yr.	4.4 yr.
Copies square	4.1 yr.	6.0 yr.
Imitates square, demonstrative	3.5 yr.	5.7 yr.
Draws man, 3 parts	3.3 yr.	5.2 yr.
Draws man, 6 parts	4.6 yr.	6.0 yr.

Plate 5.3. EXAMPLE OF FINE MOTOR ITEMS FROM DENVER DEVELOPMENTAL SCREENING TEST

Adapted from

FRANKENBURG, W. K. and DODDS, J. B. The Denver Developmental Screening Test. *The Journal of Pediatrics,* Vol. 71, 1967, pp. 181-191.

Summary

1. Motor development involves learning to control the muscles of the body so that the movements of the body can be controlled.
2. There are two types of motor skills: gross and fine.
3. From birth to five the child is developing the basic or fundamental skills.
4. At the primary level motor achievement centers around the application of fundamental skills to new situations, and the increase of strength and speed.

REFERENCES

Chapter 5

Motor Development

CRATTY, B. J. *Perceptual and motor skills in infants and children.* New York: Macmillan Co., 1970.

ESPENSHADE, A. and ECKERT, H. *Motor development.* Columbus: Charles E. Merrill, 1967.

FRANKENBURG, W. K., DODDS, J. B. and FANDAL, Alma W. *Denver Developmental Screening Test - Manual.* Denver, Colorado: University of Colorado Medical Center, 1970.

GESELL, A. and others. *The first 5 years of life.* New York: Harper and Row, 1940.

WATSON, R. *The psychology of the child,* 2nd edition. New York: John Wiley and Sons, 1965.

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- CHAPTER 4. IMPORTANT CONCEPTS OF CHILD DEVELOPMENT
- CHAPTER 5. MOTOR DEVELOPMENT
- CHAPTER 6. INTELLECTUAL DEVELOPMENT involves the development of many different skills.
  - Perception is the ability to recognize and discriminate the raw information taken in by the senses. A preschool child is dependent on this ability; the primary child can organize his perception and comprehend symbols.
  - In the primary years symbolic organization flourishes.
  - As a child grows older, he will rely more on symbols to learn new things.
- CHAPTER 7. SOCIAL-EMOTIONAL DEVELOPMENT
- CHAPTER 8. LANGUAGE DEVELOPMENT

CHAPTER SIX

INTELLECTUAL DEVELOPMENT

The Concept of Intelligence

Many people used to think that intelligence was something a person was born with like blue eyes or a pug nose: either he had it or he did not have it. People also used to think that intelligence was one single ability that allowed a person to do all the things considered "intelligent." But it is now known that intelligence *develops* in much the same way as other kinds of behavior and that intelligence is made up of *many, different skills,* some of which a person might do well while doing others rather poorly.

Another common source of confusion arises when people think intelligence is the same thing as the I.Q. But the I.Q. is just a test score; it is the number of test items a person is able to perform correctly made into a ratio that reflects the person's performance relative to other people his age. The intelligence part of it comes in when the tasks on the intelligence test are examined. The person must have developed certain intellectual skills up to a certain point in order to correctly perform the tasks on the test. There are many intellectual skills a person might have developed to a high degree that are not covered in the intelligence test. The tasks given to the person just require him to call into use some intellectual skills that are important to success in school.

This chapter will look at some major intellectual skills that normal children develop between birth and 8 years of age.

Perception

Perception is a skill that develops and is particularly important during the preschool years. It is the ability to recognize and discriminate the raw information taken in by the senses (vision, hearing, touch, etc.). Senses pick up lights, sounds, smells, tastes and send this information on to the brain. Then the brain translates this information into symbols which a person can recognize as things he knows (recognition) and then tells him how the object is alike or different from other objects (discrimination).

Perception helps the young child make some sense out of his physical world. For example, the loud, sharp noise becomes the barking of a dog; the rough, gritty feel becomes sandpaper; dogs and cats look alike but make different sounds; lemons and limes both taste sour but are different colors. These are all things the young child will not know until he has learned to perceive them.

But there's a problem. The young child is dependent on his perceptions, and that is somewhat of a handicap. A person who has only his perceptions to work with has to take things at "face-value." To him, the way things look is the way they are. And that is often not the case at all.

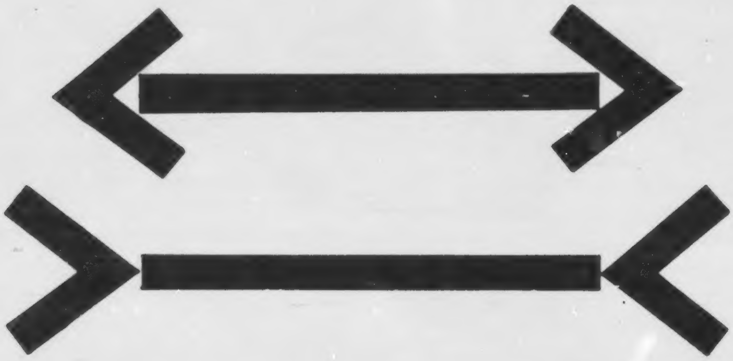

Plate 6.1 MULLER-LYER ILLUSION

In the figure in Plate 6.1 the lower line looks longer than the upper line. However, in reality, the two lines are the same length. This is a perceptual *illusion* and indicates how one's perceptions can give a distorted idea of how things are.

The young child is confronted with distortions like this all the time in situations where an adult would not be fooled because he has long since developed other intellectual skills to overcome the distortion. So although perception is a useful first step in making sense out of the world, the child must soon develop other intellectual skills to overcome the limitations of perception.

Perceptional Organization

By the time the child reaches the primary grades, he has begun to perceptually organize the world he lives in. This means that the child has accumulated enough experience ~~with his~~ immediate surroundings to discover the *rules* by which things operate. He is no longer taken in by the way things appear on the basis of perception alone. He can spot things that don't fit in with the rules he knows and he can arrange things to conform to these rules.

For example, if a three year old is shown a picture of a wagon with three wheels and is asked what is wrong with it, he will not understand the question. He perceives the picture as it is and it doesn't occur to him that there is something wrong. A five year old, on the other hand, has learned the rule that wagons have four wheels; so he will be able to tell that one wheel is missing.

Consider the drawing of human figures. A seven year old child can draw a fairly accurate (if not artistically pleasing) picture of a human being because he has learned the rules about the essential body parts of people. But a similar drawing by a preschooler may be hardly recognizable. The preschooler can recognize and discriminate human body parts when he sees them. That is simple perception. But he cannot draw a picture of one from scratch very well because he doesn't carry with him (in his head, so to speak) a clear idea of what human beings are supposed to look like. That is, he is not perceptually organized when it comes to human figures.

As with most kinds of development, perceptual organization first begins with simple, obvious things, such as the number of arms and legs a human figure has, and moves on to more and more subtle and complicated rules, such as the arrangement of facial features. The necessary ingredient in the development of perceptual organization is experience. The amount and kinds of experiences a child has will determine the *age* at which he begins to show perceptual organization and the *kinds* of information he will be able to organize.

Symbolic Organization

With certain very familiar words the child may begin to organize his symbols as early as age 3 or 4. But it is not until the primary grades that symbolic organization truly begins to blossom.

Children organize symbols in a number of different ways. One way is in terms of how they define words. A small child defines words in line with how he perceives the object when he sees, hears or touches it; that is, he will describe the object that the words stand for. Consequently, a "dog" is furry and barks, a "rock" is hard, and so on. But a primary child can define words in terms of the class of things it belongs to. So he will say that a "dog" is an "animal" and *then* describe its essential features (four legs, fur, etc.)

Another way children organize symbols is by retelling a story keeping the plot straight. The events represented by the words in a story are related to each other in terms of the order in which they happen. If the child is still having trouble organizing symbols he won't be able to spot the relationships among the events and will retell the story with the order of events mixed up ("The three bears came back to the house and Goldilocks ate their cereal.")

Naturally, the success a primary child has with retelling a story will depend on how many separate events there are and how obvious the plot is. Even the brightest 8 year old would have trouble recounting the "History of the United States."

The third example of symbolic organization is associated with perceptual organization. Primary children grasp the rules by which their world runs well enough to spot things which are out of place or which don't make sense. Toward the tail end of the primary years, they can do much the same thing with symbols. Suppose a seven or eight year old is told something like this: "A man had the flu twice. The first time he died. The second time he got well quickly." This is illogical, of course, and the child will be able to tell you it can't happen and why it can't happen.

This last example illustrates an important point: the similarity between the development of perceptual skills and symbolic skills. At the preschool level, the child absorbs new information rather haphazardly, whether in perceptual or symbolic form. At the primary level, the child organizes his information into logical groups and relationships. He's integrating his perceptions with each other and doing the same with his symbols.

However, perceptual organization usually starts to develop earlier and faster than symbolic organization does. Perceptions directly involve real objects, events, and relationships that the child runs into every day. They are easier to learn and organize than symbols, which are only representations of the real world and some of which are not directly tied to perceivable things in the real world.

The older the child gets, the more he will rely on symbols to learn new things. Precisely because symbols can represent things that are rather abstract, the child can use them to learn about things that aren't part of his immediate surroundings, things like history, geography, and science. Although symbols are more difficult to handle and harder to organize, they will nevertheless become one of the predominant intellectual skills in the child's later life.

Summary

1. Intelligence develops and consists of many skills.
2. Perception is the ability to recognize and discriminate the raw information taken in by the senses. A preschool child is dependent on this ability; the primary child can organize his perceptions and comprehend symbols.
3. In the primary years symbolic organization flourishes.
4. The older a child gets, the more he will rely on symbols to learn new things.

REFERENCES

Chapter 6

Intellectual Development

CAZDEN, C. *Child language and education*. New York: Holt, Rinehart and Winston, 1972.

DE CECCO, J. *The psychology of language, thought, and instruction*. New York: Holt, Rinehart and Winston, 1967.

GINSBURG, H. and OPPER, S. *Piaget's theory of intellectual development: An introduction*. Englewood Cliffs, New Jersey: Prentice-Hall, 1969.

GUILFORD, J. *The nature of human intelligence*. New York: McGraw-Hill, 1967.

HUNT, J. McV. *Intelligence and experience*. New York: Ronald Press, 1961.

McCARTHY, D. Language development in children. In L. Carmichael (Ed.), *Manual of child psychology,* 2nd edition, New York: John Wiley and Sons, 1954, 492-630.

MENYUK, P. *Acquisition and development of language*. New York: Harper and Row, 1971.

ROBINSON, H. B. and ROBINSON, N. M. *The mentally retarded child: A psychological approach*. New York: McGraw-Hill, 1965.

TERMAN, L. and MERRILL, M. *Stanford-Binet intelligence scale: Manual for the third revision*. Boston: Houghton Mifflin, 1960.

WALLACH, M. Research on children's thinking, National Society for the Study of Education, 62nd Yearbook. *Child Psychology*, Chicago: University of Chicago Press, 1963, 236-276.

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- CHAPTER 4. IMPORTANT CONCEPTS OF CHILD DEVELOPMENT
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- CHAPTER 6. INTELLECTUAL DEVELOPMENT
- CHAPTER 7. SOCIAL-EMOTIONAL DEVELOPMENT is the development of a child's relationship with his peers.
  - Children learn to work and play cooperatively in stages: solitary, parallel, associative, cooperative.
  - The establishment of a leader and group norms help children play cooperatively.
  - An accepted child is generally friendly, sociable, cooperative, and self-reliant, while a rejected child tends to be socially withdrawn and indifferent.
  - A child must learn to be aggressive in only certain ways.
  - Differences in interests and activities appear in boys' and girls' play during preschool years.
  - A child's self-concept is related to his direct experience with success and failure and the feedback he receives from others in regards to his strengths and weaknesses.
  - During preschool and primary years, parents teach a child his basic social skills, and peers refine and modify them.
- CHAPTER 8. LANGUAGE DEVELOPMENT

CHAPTER SEVEN

SOCIAL-EMOTIONAL DEVELOPMENT

Probably the most outstanding parts of the young child's world are the people in it: parents, teachers, brothers and sisters, peers. Through the processes of socialization, they will play an important role in determining the kind of adult that child will become. And, since the ultimate goal of all development is an individual who can function competently and harmoniously in society, it is extremely important that the child learn to behave appropriately when interacting with people.

This chapter will focus on the development of the child's relationships with his peers, other individuals his own age. While the impact of the child's relationships with the adults around him is also extremely important, the individual's eventual adjustment as an adult is heavily dependent on his ability to get along with people his own age.

Cooperation

The first topic focuses on how children learn to work and play cooperatively in groups. The first stage of play is *solitary play*. The child plays by himself with no contact with peers or adults.

The second stage occurs in the preschool years when the child has his first contact with children his own age. The first sign of his new "sociability" is called *parallel play*. Parallel play is characterized by children absorbed in their own play interests but playing physically near each other. This might not seem to be a very social setting. But it is a step on the way to a more complex type of social play: associative play.

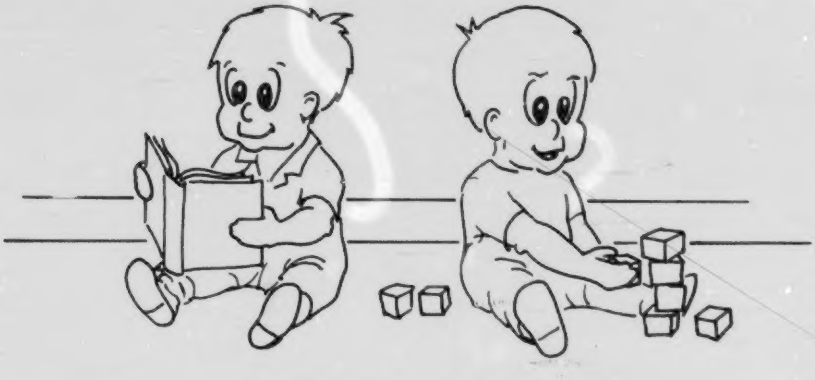

Plate 7.1 PARALLEL PLAY

In *associative play* the children share materials and talk to each other. However, they still do not need each other to enjoy their activities. All the other children could leave, and the child who is left could still happily continue with whatever he's doing.

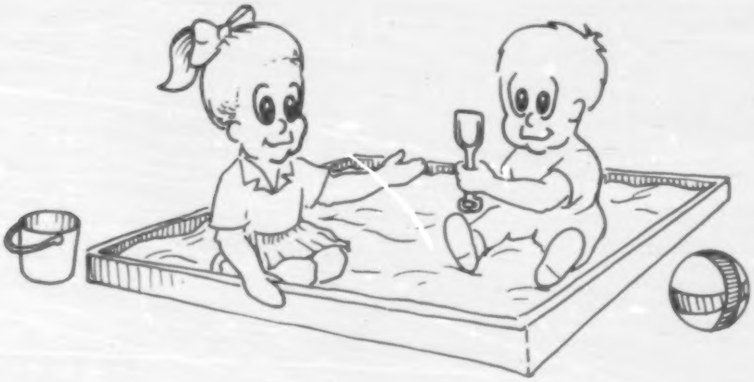

Plate 7.2 ASSOCIATIVE PLAY

Finally, toward the tail end of the preschool years, children engage in *cooperative play*. The most important feature of cooperative play is that each child has duties to perform for the game to succeed. That is, the play situation will collapse if the children do not cooperate with each other.

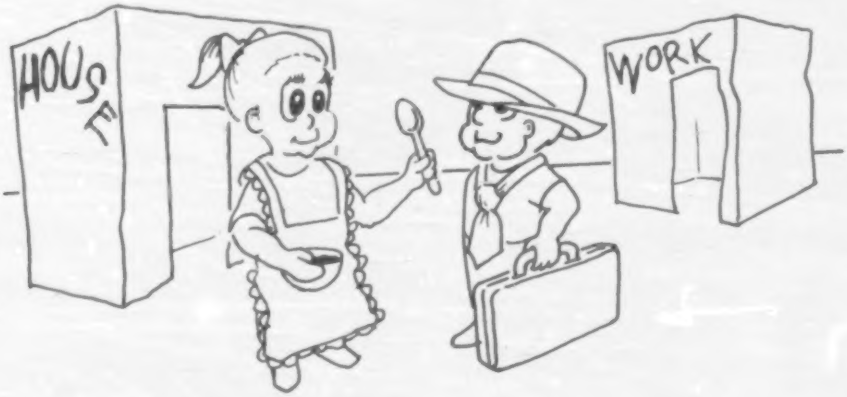

Plate 7.3 COOPERATIVE PLAY

The "let's pretend" game shown in Plate 7.3 is common in the cooperative play of preschoolers. But as the child enters the primary grades, cooperative play extends to more complex game-situations such as the team sports of dodge ball and soft ball.

One of the factors that helps children in groups work and play cooperatively is the *leader*. Most informal groups have one or more children with the ability to take command of the situation. These children decide what games are to be played and who is responsible for doing what. If the leader is effective, the other children will comply with his decisions without too much squabbling and fighting. Among young primary children, however, it is not uncommon for a leader to find himself with no one to lead because everyone got mad and went home.

A second factor that aids children's cooperation is the fact that groups develop their norms or rules for behavior. Norms such as the ones in Plate 7.4 smooth out the members' interactions with each other by specifying who is in charge of certain things and what inter-member behavior is not allowed.

1. Whatever Johnny [the leader] says goes.
2. Timmy brings Coke to the "meetings" cause his dad has a super-market.
3. We vote on letting new guys in.
4. We don't fink on each other.

Plate 7.4 EXAMPLE OF CHILDREN'S CLUB RULES.

In addition, there are also norms like the ones shown in Plate 7.5. These norms represent symbols of membership in the group. They give the children a feeling of belonging to something special. The stronger that feeling is, the more it is likely that the members will cooperate with each other.

1. We watch Batman every night at 5:30
2. We collect baseball cards
3. We wear black sneakers
4. We stick out our tongues at our sisters when mom and dad aren't looking
5. No little kids allowed

Plate 7.5 EXAMPLES OF CHILDREN'S CLUB RULES

Acceptance and Rejection

Since getting along with peers is important in our culture, it is a serious matter if a child is rejected by his peers The personal characteristics of the child who is accepted and liked by his peers tend to be the same for 3 year olds and 15 year olds. Despite the dramatic changes that occur in most areas of development, these characteristics do not change greatly. The accepted child is generally friendly, sociable (he likes to be around people), cooperative, and self-reliant He also shows the behaviors that are expected of him for his age and sex

On the other hand, the child who is actively disliked by his peers tends to be socially withdrawn and indifferent: that is, he is not only an isolated child, he also doesn't seem to enjoy the company of other children, and is rebellious toward authority and hostile toward his peers. Contrary to popular myth, the child who refuses to cooperate with the teacher or other adults is not popular with his peers. unless the adult is someone who is disliked or feared by all the children

Aggression

Some of the characteristics of the accepted child are particularly interesting because they represent trends in social development that make it generally easier for children to get along with each other. One such characteristic involves showing age-appropriate aggression. Aggression refers to ways children express their feelings of anger, frustration, or fear that could do deliberate harm to someone else

The following list contains some behaviors that are commonly called aggressive if they are used to hurt someone. Not all the behaviors lead to physical injury. There are verbal behaviors that can also do harm

1. Shouting abuse
2. Hitting
3. Scratching
4. Scornful teasing
5. Kicking

Plate 7.6. AGGRESSIVE BEHAVIORS

As part of the child's social development, he must learn to be aggressive only in certain ways. The goal is not to wipe out aggressiveness altogether but to channel it along ways which are generally more acceptable to the society at large. And so, from the ages of about 2 to 8, the following trends are distinguishable:

1. The frequency of physical aggressiveness goes down and is replaced by verbal aggressiveness. Although verbal aggressive behavior can also be harmful, our culture views it as less damaging than physical aggressive behavior
2. The young child's short but frequent angry outbursts of crying and insults are replaced by the fewer but longer-lasting arguments of older children.
3. Random temper-tantrums are replaced by retaliation that is directed at the source of the troubles. Young children often react to unpleasantness with aimless screaming and kicking at everyone and everything. The older child, however, directs his retaliation at the guilty party, without involving innocent bystanders.

Sex Differences

Another interesting characteristic of accepted children is sex-appropriate behavior. In almost every society, a distinction is made between how males are supposed to act and how females are supposed to act. Of course, no one expects young children to behave like little men and little women. But there is enough pressure from adults to learn sex-appropriate behavior that differences in the behavior of boys and girls begin to appear during the preschool years.

For example, by age 3 children differ according to sex on the amount and kind of aggressive behavior they show. The trends outlined concerning aggressive behavior are still true; but at all ages past 3 boys show aggressive behavior of both kinds more often than girls.

Another sex difference in the preschool years appears in the types of play activities boys and girls prefer or are allowed to engage in. By age 3 boys are already mostly involved in what we usually think of as masculine activities. Rarely will a preschool boy be willing to play dolls.

But for girls, the situation is different. Girls' play interests often consist of both masculine and feminine activities until the intermediate grades. At that time they begin to show a stronger preference for feminine activities. It should be mentioned, though, that there is much variation in that trend from community to community. In some neighborhoods and schools there is great pressure even on girls of kindergarten age to behave in a feminine fashion. And of course there are wide individual differences, too.

There is one set of behaviors on which sex differences are significant but not obvious until the primary years: dependency. The term "dependency" refers to behaviors that involve seeking approval and attention from other people, particularly adults. (We are not referring to physical dependency here.) Plate 7 7 shows the changes in the amount of dependency both boys and girls demonstrate as they grow older. Both sexes get less dependent with increasing age. However, at any given age past the preschool years, boys will show fewer dependency behaviors than girls.

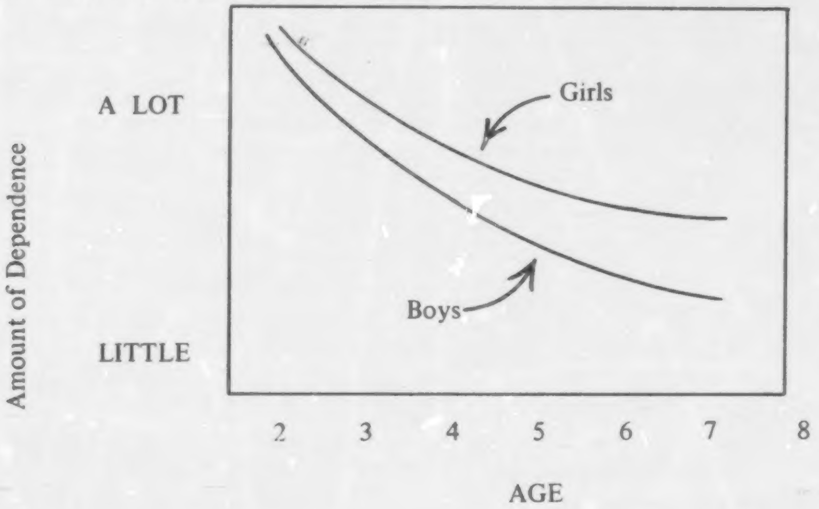

Plate 7 7 AGE-DEPENDENCY RELATIONSHIP

Self-concept

The child's self-concept consists of all the different ideas he has about himself. Little is known about a child's self-concept. In particular, it is not known at what age a child begins to form ideas about himself, except to say that most children have some rough notions about their own "goodness" or "badness" by the time they enter school.

The child's self-concept, even if it is a bit vague, is related to his acceptance by his peers. The accepted child generally has a positive but realistic opinion of his strengths and weaknesses. The child whose self-concept is negative or unrealistically high will often not be too popular.

Self-concept is also related to school achievement. The higher a child's self-concept is (within realistic limits), the more likely it is that he is also doing well in school.

There are two major sources that a child draws on to develop his self-concept. The first of these is his direct experience with success and failure. Obviously, the child who always gets the lowest grade on arithmetic tests will come to think of himself as poor in arithmetic. And sometimes this feeling of failure may spread to other subjects as well and result in a child whose self-concept is very negative with regard to school.

However, there are many situations where it is not easy for a person to see whether or not he is succeeding. Most children and adults rely rather heavily on the feedback they get from other people regarding their strengths and weaknesses. A large portion of a child's self-concept comes from the opinions, expressed in words and actions, that other people have of him. For example, a child of average ability in arithmetic may be constantly criticized by his parents because he is not as able as his older brother was at the same age. Consequently, he may include his parents' negative attitude toward him into his own self-concept and think of himself as a failure in arithmetic.

Parents and Peers

Who is responsible for the many changes in behavior discussed in this chapter? As mentioned in Chapter 4 in relating to socialization, there are two groups of people who are particularly influential: parents and peers. With regard to social development, this slightly over-simplified statement can be made: Parents lay foundations; peers refine and modify. As an example, look at Tommy.

When Tommy was a preschooler, he was told by his parents that he must not kick and hit when he is angry. Instead, he should tell people what is wrong. Tommy's parents were teaching him the basic rule that verbal aggressive behavior is more acceptable than physical aggressive behavior.

But when Tommy got to grade school and started spending a lot of his time with boys his own age, he discovered that there were some exceptions to that basic rule. He learned that there were times when "you've just got to fight it out" and that this was acceptable if it was a fair fight between two boys of about the same size using their fists. So the basic rule he learned from his parents was modified by his peers.

There are also times when the peer group can step in and teach foundation rules which, for one reason or another, the child might not have learned. An example of this is Gloria.

Gloria's mother died when she was 2 years old, and for the last 5 years she has been raised by her father and two older brothers. Because there was no woman in the household, Gloria tended to copy the dress and behavior of her brothers and turned out to be a super Tomboy. In other words, Gloria had no mother to teach her basic rules for sex-appropriate behavior.

However, when Gloria began to spend time with three of the girls from her class, they convinced her to wear dresses more often, collect movie magazines, and idolize David Cassidy. Gloria even learned not to beat up the neighborhood boys anymore. So it can be said that Gloria's peers stepped in and taught her some basic rules of sex-appropriate behavior.

During the preschool and primary years, parents bear the major burden of teaching the child basic social skills. Peers, at this time, refine and modify these basic skills. But with increasing age, the child will rely more and more on his peers to teach him the skills he needs to be a socially competent individual.

Summary

1. Social emotional development is the development of a child's relationship with his peers.
2. Children learn to work and play cooperatively in stages: solitary, parallel, associative, and cooperative.
3. The establishment of a leader and group norms help children play cooperatively.
4. An accepted child is generally friendly, sociable, cooperative, and self-reliant, while a rejected child tends to be socially withdrawn and indifferent.
5. A child must learn to be aggressive in only certain ways.
6. There is so much pressure from adults in society that differences in the behavior of boys and girls appear during preschool years.
7. A child's self-concept is related to his direct experience with success and failure and the feedback he receives from others in regards to his strengths and weaknesses.
8. During preschool and primary years, parents teach the child his basic social skills, and peers refine and modify them.

REFERENCES

Chapter 7

Social-Emotional Development

CAMPBELL, J. D. Peer relations in childhood. In M. L. and L. W. Hoffman (Eds.), *Review of Child Development Research*, Vol. 1, New York: Russell Sage Foundation, 1964, 289-322.

GLIDEWELL, J. C. and others. Socialization and social structure in the classroom. In M. L. and L. W. Hoffman (Eds.), *Review of Child Development Research*, Vol. 2, New York: Russell Sage Foundation, 1966, 221-256.

HARTUP, W. W. Peer interaction in social organization. In P. E. Mussen (Ed.), *Carmichael's Manual of child psychology*, 3rd edition, Vol. 2, New York: John Wiley and Sons, 1970, 361-456.

KAGAN, J. Acquisition and significance of sex-typing and sex-role identity. In M. L. and L. W. Hoffman (Eds.), *Review of Child Development Research*, Vol. 1, New York: Russell Sage Foundation, 1964, 137-168.

MACCOBY, E. and MASTERS, J. Attachment and dependency. In P. E. Mussen (Ed.), *Carmichael's Manual of child psychology*, 3rd edition, Vol. 2, New York: John Wiley and Sons, 1970, 73-158.

MEAD, G. H. *Mind, self and society*. Chicago: University of Chicago Press, 1934.

MISCHEL, W. Sex-typing and socialization. In P. E. Mussen (Ed.), *Carmichael's Manual of child psychology*, 3rd edition, Vol. 2, New York: John Wiley and Sons, 1970, 3-72.

PARTEN, M. Social participation among preschool children. *Journal of Abnormal and Social Psychology*, 1932-1933, 27, 243-269.

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- CHAPTER 7. SOCIAL-EMOTIONAL DEVELOPMENT
- CHAPTER 8. LANGUAGE DEVELOPMENT is the development of a set of symbols with rules that are shared by a group of people as a tool for communication and problem-solving.
  - Language consists of many parts that develop at different rates.
  - Language development begins with speech sounds.
  - Vocabulary development has two parts - listening and speaking.
  - Grammar development does not usually begin until age two, but by age three, the child's grammar closely resembles his parents'.
  - Language is well established by the time a child enters kindergarten.

CHAPTER EIGHT

LANGUAGE DEVELOPMENT

Infancy to Age 5

Language is . . .

a set of symbols	*abstractions that take the place of real objects, actions and relationships*
with rules for their development	*grammar*
that is shared by a group of people as a tool in communication and problem solving.	*intellectual development*

Plate 8.1 lists the major breakthroughs and accomplishments the child makes during the development of his language skills. Three aspects of language especially important to the teacher are *speech sounds, vocabulary* and *grammar.*

Speech Sounds

Speech sounds could be called the lowest rung on the language ladder of skills. They are the actual sounds (like *ch, mm, ff,* etc.) a person makes when speaking. The infant's babbling contains all the individual speech sounds he will need to pronounce any kind of word. The major characteristic of this developmental stage is that the sounds have no meaning by themselves.

Vocabulary

Logically, the next skill the child begins to work on is the use of words, or vocabulary. Vocabulary implies that the child knows the meaning of the words he uses. Vocabulary development usually begins at 1 year.

There are differences between what is called a child's speaking vocabulary (words he uses in his own speech) and his listening vocabulary (words he understands when someone else is using them). In most cases, and

Plate 8.1. LANGUAGE DEVELOPMENT – INFANCY TO AGE 5

LANGUAGE MILESTONES

Age	Achievements
6 Months	The infant changes from cooing to babbling. He now vocalizes consonant sounds.
1 Year	The infant repeats syllables (da-da, la-la-la). He shows signs of understanding some words spoken to him. The first spoken "words" appear; that is, the child uses certain sounds regularly to refer to people or objects.
1½ Years	The infant has a speaking vocabulary of 3-50 isolated words. He combines sounds together in ways resembling conversation.
2 Years	Speaking vocabulary is now more than 50 words large. The child combines two words to make a phrase (i.e., "want water"). Babbling disappears.
2½ Years	The child acquires new words daily. He combines three or more words into phrases. He appears to understand most of what is said to him. He still makes many grammatical errors.
3 Years	The child's speaking vocabulary averages about 1000 words. His speech is intelligible about 80% of the time. His grammar closely approximates the grammar of the adults around him. The grammatical errors he does make are consistent.
4½ Years	Language is well established. Grammatical errors are restricted to the complicated exceptions to general grammatical rules. He has yet to learn the more "literate" aspects of sentence structure and vocabulary.

Adapted from

LENNELBERG, E. H. "On Explaining Language," *Science*, 1969, pp. 164, 653-53.

especially with the preschooler, the child's listening vocabulary includes all the words in his speaking vocabulary plus many others. Also, listening vocabulary develops much faster than speaking vocabulary.

When listening to a young child, one must remember that the child's meaning for a word might be quite different than the average adult's. For example, all animals may be "bow-wows" and all men "da-das" to the toddler.

Language development in the area of using words in accordance with adult definitions is heavily influenced by socialization. By the age of 5 the child will be able to use abstract words like "love" or "government," but he's not intellectually ready to understand what they mean to adults.

Grammar

The young child learns to arrange words in their proper order in his own speech at a very early age (usually beginning at age 2) and quite effortlessly. The first resemblance of grammar or rules on the child's speech is the combining of two words into a phrase. Skills in other phases of grammar are relatively slow to appear, but once started, increase tremendously.

"I dropped my ball."

"I go ed to bed."

"I am'ed good."

Though the grammar of a 3 year old is fairly close to the grammar used by his parents, he makes some interesting, but consistent, grammatical errors. The type of error that was made in the sentences above indicate that the child's language is more consistent than the English language. The exceptions in irregular verbs will confuse him for another year at least.

Language is Developed

The fundamental language skills in speech sounds, vocabulary, and grammar are already developed in most children by age 4. During the school years, the child will develop larger speaking and listening behaviors; the length and grammatical complexities of his sentences will increase, and, of course, he will learn to read.

Summary

1. Language is a set of symbols with rules for their development that is shared by a group of people as a tool in communication and problem-solving.
2. Language, like other areas of development, consists of many parts that develop at different rates.
3. Language development begins with speech sounds.
4. The next step, vocabulary, consists of two parts - listening and speaking.
5. Grammar development does not usually begin until age 2. but after its appearance it develops so rapidly that by age 3 the child's grammar closely resembles that used by his parents.
6. Language is well-established by the time the child enters kindergarten.

REFERENCES

Chapter 8

Language Development
Infancy to Age 5

CAZDEN, C. *Child language and education*. New York: Holt, Rinehart and Winston, 1972.

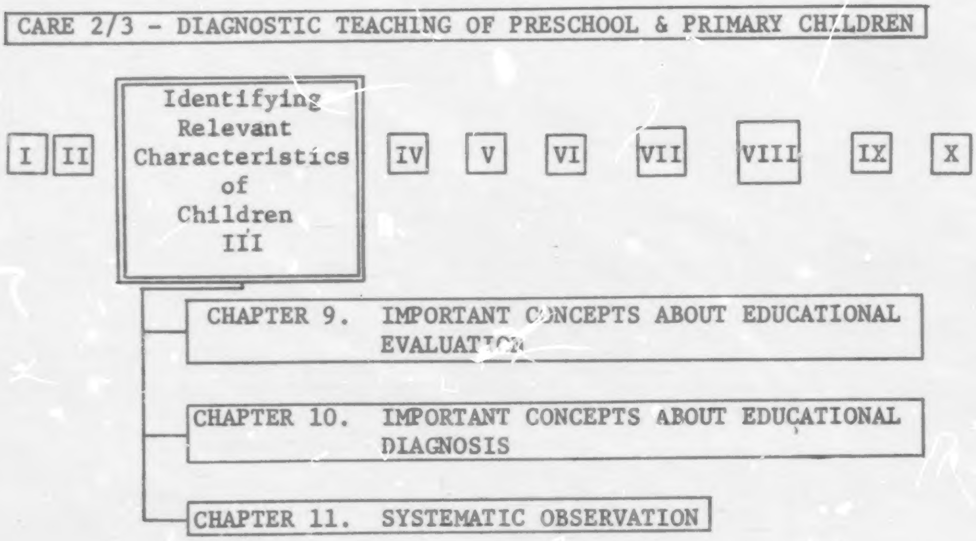
DE CECCO, J. *The psychology of language, thought and instruction*. New York: Holt, Rinehart and Winston, 1967.

LENNEBERG, E. H. *Biological foundations of language*. New York: John Wiley and Sons, 1967.

McCARTHY, D. Language development in children. In L. Carmichael (Ed.), *Manual of child psychology,* 2nd edition, New York: John Wiley and Sons, 1954, 492-630.

PART III

IDENTIFYING RELEVANT CHARACTERISTICS OF CHILDREN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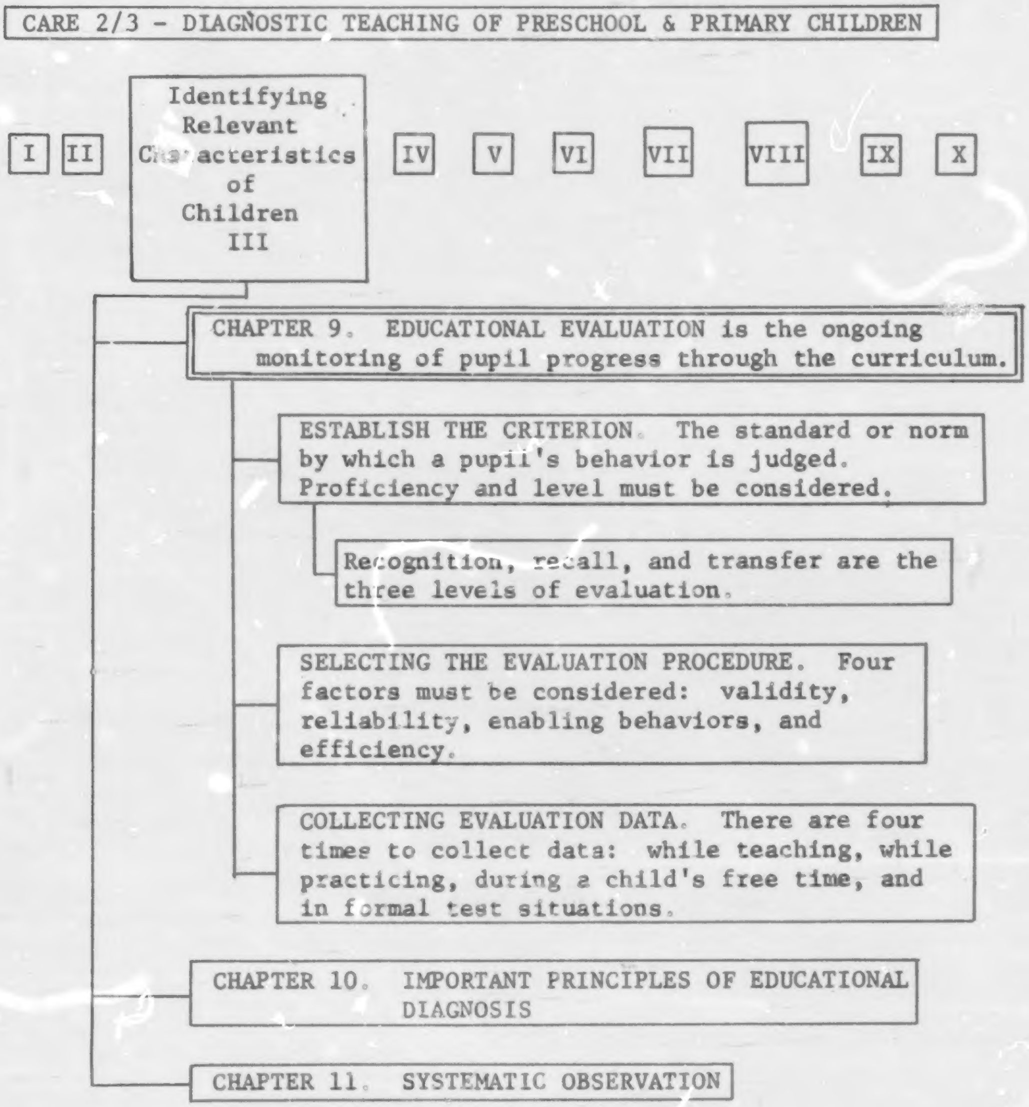
PREFACE TO CHAPTERS NINE, TEN AND ELEVEN

Once the teacher knows the normal pattern of child development, he is ready to begin to apply this knowledge in the classroom. At this point he should know if a child's behavior is typical for his particular age group. If the teacher notes a significant discrepancy between what the child does and what the majority of children that age do, then the teacher's task is to plan a program of remediation for the child. However, the teacher may not know how to go about correcting an observed problem.

To perform this task, a teacher must first learn how to identify the relevant characteristics of a child. This section examines three aspects of this task: evaluation, diagnosis, and systematic observation. Basically these chapters are designed to help the teacher begin to apply what he has learned thus far in the course.



CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II

Identifying Relevant Characteristics of Children
III

IV V VI VII VIII IX X

CHAPTER 9. EDUCATIONAL EVALUATION is the ongoing monitoring of pupil progress through the curriculum.

ESTABLISH THE CRITERION. The standard or norm by which a pupil's behavior is judged. Proficiency and level must be considered.

Recognition, recall, and transfer are the three levels of evaluation.

SELECTING THE EVALUATION PROCEDURE. Four factors must be considered: validity, reliability, enabling behaviors, and efficiency.

COLLECTING EVALUATION DATA. There are four times to collect data: while teaching, while practicing, during a child's free time, and in formal test situations.

CHAPTER 10. IMPORTANT PRINCIPLES OF EDUCATIONAL DIAGNOSIS

CHAPTER 11. SYSTEMATIC OBSERVATION

CHAPTER NINE

EDUCATIONAL EVALUATION

In the context of the Diagnostic Teaching Model (see Chapter 3), educational evaluation refers to an on-going monitoring of pupil progress through the curriculum. The pupil is checked to see if he is learning what the teacher is trying to teach. In this chapter a systematic sequence of evaluation activities will be explained. Educational evaluation consists of four components: establishing a criterion, selecting an evaluation procedure, collecting the evaluation information or data, and making decisions on the basis of the data.

Establishing the Criterion

The first step is to establish the criterion. The criterion is the standard or norm by which a pupil's behavior is judged. The criterion specifies the amount and type of pupil behavior which satisfies the teaching objective – it tells what and how well the pupil must do. Two factors need to be considered in establishing a criterion – proficiency and level.

Proficiency. Proficiency is the quantitative aspect of a criterion – and represents the point where the learning is strong enough to be retained. It states how many times a pupil must perform an activity successfully before an objective can be said to have been met. Or, it states how many successful performances must be done in a given amount of time. The teacher may be satisfied with only one successful performance, or the teacher may specify the successful behavior must be demonstrated several times. In a sense, the proficiency aspect of a criterion is somewhat arbitrary. For example, if a teacher wishes a pupil to know that 2 + 2 are 4, he may want the child to correctly supply the answer three times in a row, 10 times in a row, or 30 times in a row. The decision of how many times depends upon the nature of the task and the characteristics of the learner. The teacher generally wants the pupil's learning to be permanent. In some cases one successful pupil demonstration can assure the teacher that a behavior has been mastered. For example, if a child successfully climbs a 10 foot high rope once, the teacher can feel fairly confident that the child could do it again – if the child is not fatigued. Here, the task is such that one demonstration should be enough. In other cases, the teacher may desire several successful responses before he is satisfied that the pupil can perform successfully. For example, the teacher places red, green, blue, and yellow blocks before a child and asks the child to point to the yellow one. By chance the child could find the yellow block. Therefore, the teacher may require that the pupil find the yellow block four times in a row (the teacher mixes the blocks after each trial). In this case, the probability of the child finding the correct block four times in a row is $1/4^4$ or one time in 256 attempts; it's unlikely that the child could succeed by guessing. A final point about proficiency should be made. The more practice with which a pupil is provided, the more likely he is to retain what he has learned. Thus, for children who forget what they have learned, a more rigorous criterion is appropriate over-learning. The teacher must bear in mind though that the more overlearning (practice beyond learning), the fewer things he will be able to teach since there are only so many hours in the school day.

Level. Level tells the teacher the type of behavior to demand. While there are several levels of learning, in this chapter three will be considered: recognition, recall, and transfer. In a behavioral objective (see Chapter 12), the teacher specifies the level by specifying the behaviors and conditions of learning.

At the *recognition* level, the child is asked to discriminate among alternatives to find the correct response. The task can be as simple as a match to sample format: Which one is like the first one?

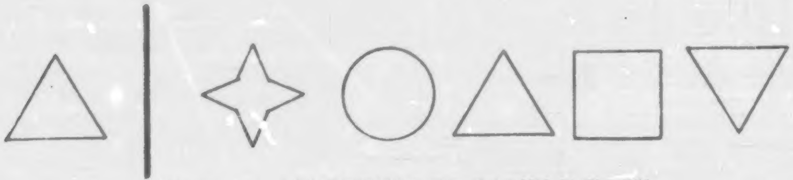


Plate 9.1 MATCHING TO SAMPLE TASK

Recognition can also be the common multiple choice format; draw a line through the triangle below.

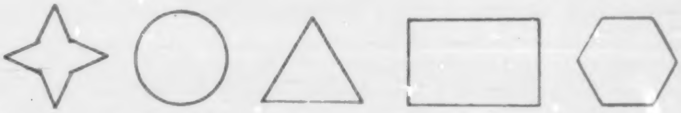


Plate 9.2 MULTIPLE CHOICE TASK

Another level of learning is *recall*. Here, recall means that the correct answer is not provided with a group of incorrect possible answers. For example, a teacher might ask a child to draw a triangle without a model — to draw a traingle from memory.

*Transfer** is another level of learning. Here, transfer means the application of what has been learned in a different situation. For example, the teacher may wish to teach jigsaw puzzle completion. The teacher gives the child two puzzles to put together with the teacher's help – e.g., verbal or visual cues to facilitate fitting the pieces. The teacher then gives the child a third puzzle to complete. The teacher wants the child to complete this puzzle without help – to *apply* what he has learned about fitting puzzles together. Another example would be using spelling list words correctly in essays.

The criterion specifies what the child will do (level) and how often he must do it (proficiency) to demonstrate he has met the objective.

Selecting the Evaluation Procedure

The second step in educational evaluation is to select the evaluation procedure. A well-defined objective will specify the evaluation procedure to be used by specifying the *terminal behavior* for the child and the *conditions* under which the behavior will be demonstrated. The evaluation procedure must be consistent with the objective. The method selected must measure the same thing specified in the objective. If the objective is to have the child copy the letter A, then the child must be provided a model to copy the A from.

Four factors must be considered in the selection of an evaluation procedure: validity, reliability, enabling behaviors, and efficiency.

Validity. Validity asks a simple question. "Are you measuring what you say you are measuring?" There are two ways of determining validity: logical and empirical. Logical validity refers to a judgment about the adequacy and appropriateness of the content. In the simplest terms, you inspect the content (and perhaps format) of a test to see if the test looks as though it's measuring what it is supposed to measure – to see if the content is appropriate.

Empirical validity is research derived. Through various statistical procedures, researchers determine if a test or evaluation device measures what it is intended to measure. For example, if test A is thought to measure intelligence and test B is also thought to measure intelligence, then children should get similar scores on both tests. Generally, a newly developed test is compared with an established test that is assumed to measure the same trait or ability. If the new test yields a similar score for a pupil as the established test, the new test would be said to have validity. Another way of establishing empirical validity would be to ascertain if people who are known to possess the trait receive higher scores than people who do not possess the trait. For example, intuitively, mechanical engineers should have more mechanical ability than house painters. On a test of mechanical ability, we would expect mechanical engineers to score higher than house painters. If this occurred on the test, we could conclude the test has some validity.

Teacher-made tests and evaluation procedures almost always depend upon *logical* validity.

Reliability. Reliability refers to the amount of error involved in measuring a skill, ability or behavior. An evaluation device or test is reliable if the results are *repeatable*. If a child does not learn from taking the test or anywhere else, he should get the same score each time he is tested. In practice, this seldom happens; there is usually some degree of random fluctuation (technically, error variance) in a child's score on a test.

Perhaps the easiest way to think about reliability is to imagine two rulers (12-inch measuring devices) – one made of soft rubber and the other made of steel. If you set out to measure this line (———), the soft rubber ruler will stretch and contract and give different lengths each time, while the steel ruler gives consistent lengths. The rubber ruler's results are not repeatable, consistent, *RELIABLE*. The steel ruler's results are repeatable, consistent, *RELIABLE*. A measure must be reliable to be valid. Not all reliable measures are valid.

There are several types of reliability and several ways of deriving estimates of reliability. Here, only two general types of reliability will be treated: test reliability and observer reliability.

Test Reliability. Any formal, commercially available test should indicate how reliable it is. This information is determined through research and should be published in the test manual. Generally, teachers do not analyze their own informal or teacher-made tests to determine the degree of reliability.

Observer Reliability. Simply stated, observer reliability (technically, inter-rater reliability) is the degree to which two people agree in their observations of a particular child or phenomenon. For example, Teacher A and Teacher B watch a child in free play activity. Teacher A thinks the child hit another pupil three times and played cooperatively 16 times. If Teacher B thinks the child hit others and played cooperatively in the same instances, their observations are consistent – reliable. If they disagree, their observations are not consistent – unreliable. Observer reliability is generally estimated by the following formula:

$$\frac{\text{number of agreements}}{\text{number of agreements} + \text{number of disagreements}}$$

Consider the following example. The child is on the playground with his classmates. Teacher A and B are watching him and every minute for 10 minutes marking whether he is playing cooperatively or uncooperatively. Their ratings are in Plate 9.3. They agree in their ratings 6 times and disagree 4 times. Their percentage of agreement is:

$$\frac{\text{number of agrees (6)}}{\text{number of agrees (6) + number of disagrees (4)}} = 60\%$$

This indicates that their ratings are not very reliable. Generally, teachers want ratings to agree in about 90 percent or more of the cases.

Enabling behaviors. The third factor to be considered is enabling behaviors. Enabling behaviors are the skills and behaviors needed by the child to successfully meet the objective, *but which are not specified as part of the objective.* It is easiest to think about enabling behaviors in the negative sense: what things besides the child's failure to learn could cause the child to fail to meet the objective? For example, consider this objective.

Mary will sit in her seat when told to do so.

Let us assume Mary wishes to comply with the teacher's request. To do so, Mary must have several enabling behaviors.

1. Mary must hear the teacher's request. If she cannot hear the teacher's request, the teacher will have to communicate her request other than orally.
2. Mary must comprehend the various components in the command: sit, her seat as opposed to any seat.
3. Mary must be physically able to sit.

Enabling behaviors are the things we take for granted in a child's performance. Many times the prerequisites for a successful completion of an objective cannot be assumed. Knowledge of the child's relevant characteristics (the first step in the Diagnostic Teaching Model) goes a long way in overcoming difficulties in evaluating a child who may not have requisite enabling behaviors.

Efficiency. The last factor to be considered in the selection of an evaluation procedure is efficiency. Time spent evaluating can take time away from teaching. It is a good idea to select an evaluation procedure which can be incorporated into the teaching procedure. A teacher could evaluate a child during drill activities, for example. By systematically observing and recording pupil responses, the teacher can gain an accurate picture of the child's progress toward a goal without necessarily indulging in formal testing.

Plate 9.3

EXAMPLE OF OBSERVER RELIABILITY

Rating	Teacher A	Teacher B	Agree	Disagree
1	Cooperatively	Cooperatively	X	
2	Cooperatively	Cooperatively	X	
3	Cooperatively	Uncooperatively		X
4	Uncooperatively	Uncooperatively	X	
5	Uncooperatively	Cooperatively		X
6	Uncooperatively	Cooperatively		X
7	Cooperatively	Cooperatively	X	
8	Cooperatively	Cooperatively	X	
9	Cooperatively	Uncooperatively		X
10	Uncooperatively	Uncooperatively	X	
			6	4

Collecting Evaluation Data

The teacher must make sure that he collects the data he sets out to collect by the procedure he has selected. There are four times to collect evaluation data: while teaching, while practicing, during a child's free time, and in formal test situations. Each time has its own advantages. The best time to collect evaluation data depends largely upon the objective and considerations discussed under efficiency above.

There are several data collection formats which a teacher can use: demonstration, short answer questions, objectively scored questions (true-false, multiple choice, matching questions), and oral or written statements (e.g., essay questions). With a young child, it is recommended that data collection activities be made a natural and comfortable part of the diagnostic teaching process for *both* the teacher and pupil.

The evaluation procedure in the diagnostic teaching model is *not* intended to "separate" children into A's, B's, C's, D's, F's. It *is* intended to see if a child has met an objective.

Judgments

When the criterion and evaluation procedure are specified and when the data are collected, it is only necessary to compare the data with the criterion to see if the child has met the objective. If the child has met the objective, the teacher goes on to the next objective.

If the child has not met the objective, the teacher must try to figure out why not by asking himself the following questions.

1. Was the objective actually taught?
2. Was the objective appropriate? (Did the child have the enabling behaviors to meet the objective?)
3. Were the teaching methods used appropriate?
4. Were the teaching materials appropriate?

If the answers to any of the above questions were "no", the teacher should modify his strategy and teach the objective again. If the answers to all of the above questions were "yes", the teacher must begin diagnostic activities which will be discussed in the next chapter.

Summary

1. Educational evaluation is an on-going monitoring of pupil progress.
2. The first step is the establishment of the criterion.
   a. Proficiency is the quantitative aspect of criterion.
   b. Level is the qualitative aspect of criterion and includes recognition, recall and transfer.
3. The second step is the selection of evaluation procedure.
   a. Logical validity is a judgment about the adequacy and appropriateness of the content, and empirical validity is research derived.
   b. Reliability is the amount of error involved in measuring a behavior.
   c. Enabling behaviors are behaviors needed by the child to successfully meet the objective, but which are specified as part of the objective.
   d. Efficiency is the consideration of the amount of time required for the evaluation.
4. The best time for data collection depends on the objective and the efficiency of the evaluation.
5. If the child meets the objective, the teacher moves on to the next objective. If the child does not meet the objective, the teacher must evaluate the strategy to determine why not.

REFERENCES

Chapter 9

Important Concepts About Educational Evaluation

LYMAN, H. B. *Test scores and what they mean*. Englewood Cliffs, N. J.: Prentice-Hall, 1963.

MAGER, R. F. *Preparing instructional objectives*. Palo Alto, California: Fearon, 1962.

MEDLEY, D. M. and MITZEL, H. E. Measuring classroom behavior by systematic observation. In N. L. Gage (Ed.), *Handbook of research on teaching*, Chicago: Rand McNally, 1963.

SMITH, R. M. *Teacher diagnosis of educational difficulties*. Columbus, Charles Merrill, 1969.

STAKE, R., FAUST, G., RODERICK, M., CUNNINGHAM, T. and ANDRE, T. The countenance of educational evaluation. In R. C. Anderson, et al., (Eds.), *Current research in instruction*, Englewood Cliffs, N. J.: Prentice-Hall, 1969.

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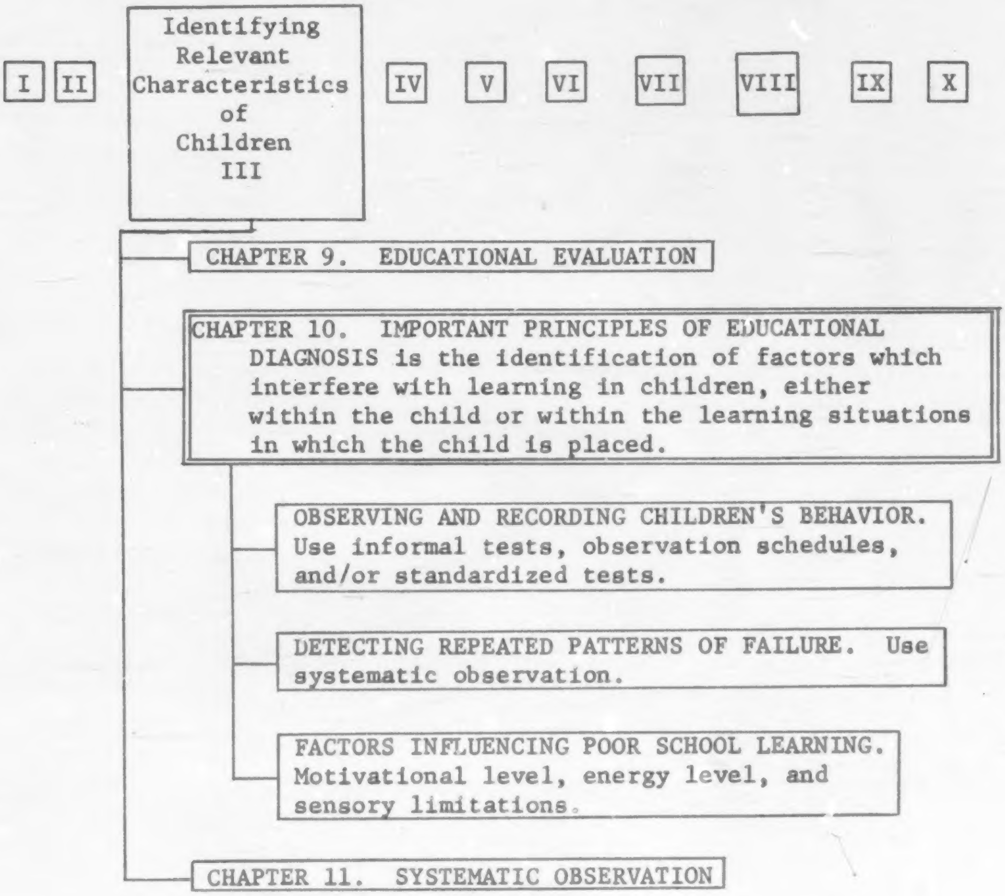

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CHAPTER 9. EDUCATIONAL EVALUATION

CHAPTER 10. IMPORTANT PRINCIPLES OF EDUCATIONAL DIAGNOSIS is the identification of factors which interfere with learning in children, either within the child or within the learning situations in which the child is placed.

OBSERVING AND RECORDING CHILDREN'S BEHAVIOR. Use informal tests, observation schedules, and/or standardized tests.

DETECTING REPEATED PATTERNS OF FAILURE. Use systematic observation.

FACTORS INFLUENCING POOR SCHOOL LEARNING. Motivational level, energy level, and sensory limitations.

CHAPTER 11. SYSTEMATIC OBSERVATION

CHAPTER TEN

IMPORTANT PRINCIPLES OF EDUCATIONAL DIAGNOSIS

Educational diagnosis is the identification of factors which interfere with learning in children, either within the child or within the learning situations in which the child is placed. This chapter presents some of the basic principles of educational diagnosis. The implications of these principles are discussed in terms of the teacher's ability to make an educational diagnosis.

The Observation and Recording of Children's Behavior

Educational diagnosis begins with observations of a child's behavior. These should be made on a number of occasions in a number of situations. A number of instruments can be used to record these observations. These might include (1) informal teacher-made tests, (2) informal observational schedules, and/or (3) standardized educational tests. The teacher should record what the child can do as well as what he cannot at a given point in time. From these measures, a profile of the child's strengths and weaknesses should be plotted on a number of behavioral indices.

The Detection of a Repeated Pattern(s) of Failure

Failure on a given task can be attributed to a number of factors, some relevant, others irrelevant. Before determining and investigating factors which may seem to be relevant causes of failure, a pattern of failure on a given task needs to be systematically observed and recorded.

A *pattern of failure* is a recurring inability to do something which is specified in the presentation of a given task or tasks. For example, the learner cannot correctly write the word "cat" when asked to do so on three occasions. If under similar circumstances the child demonstrates an inability to spell, then a pattern of behavior is established which signifies that the child has difficulty spelling.

The Continuous Testing of Hypotheses in Pinpointing the Source(s) of the Child's Difficulty

One factor alone, or many factors in combination, may affect a pupil's performance. The classroom teacher should be aware of factors which may affect a pupil's performance.

When it is observed that a child exhibits a pattern of failure, the teacher must begin to systematically identify those factors which are relevant to the child's difficulties. Initially this is a trial and error process of testing plausible hypotheses. Consequently, through assessment with a variety of measuring instruments, hypotheses are confirmed or denied with a relatively high degree of reliability and validity. On the basis of this assessment, recommendations can be made for plans for the child's educational program.

Diagnosis is a continuous process in which the teacher must continually reassess the child's progress, or lack of it, as he proceeds through the educational program. This is recommended not only when the child experiences failure, at which time a step backward is needed, but also when the child experiences success, in order to determine the next step forward.

Factors Influencing Poor School Learning

There are a number of reasons for poor performance by a child on school tasks. Some of the more obvious factors associated with a learning difficulty should be checked out first. These include the influence of the child's motivational and energy levels and sensory limitations.

Motivation. Motivation is the child's willingness to perform a task which is presented. This is influenced by the child's interest in the task and his fear of failure on a task. The following steps should be taken by a teacher who suspects a child has poor motivation.

1. Ask the child what activities he likes and dislikes.
2. Give the child a series of choices between two tasks. Take note of any tasks he refuses to do.
3. Observe what activities the child is engaged in during free time. Children will usually do those things which interest them when they have the opportunity.

Energy level. Four main factors affect the energy level of a child.

1. Fatigue
2. Nutrition
3. Illness
4. Drug Usage

If a teacher suspects a child's learning is being affected by a low energy level, he should consult with the school health personnel.

Sensory limitations. For the purposes of this course, sensory limitations are restricted to visual and auditory handicaps.

There are three basic *visual limitations* a teacher should be aware of.

1. Acuity – the ability of the eye to perceive the shape of objects in the direct line of vision.
2. Capacity – the amount of information a person can take in visually and the length of time he can continue efficiently.
3. Versatility – the ability of the eye to adapt to high and low levels of light and accommodate to the rapid adjustment of near and far points of interest.

Auditory acuity, the ability to receive auditory stimuli, is the main auditory limitation a teacher should be aware of.

A fourth factor associated with a child's learning ability is the *appropriateness of the task*. This factor is most related to the goals established by the teacher for the child. The "test" for this factor is *task analysis*, a method by which a teacher determines what the child must be able to do in order to succeed. This procedure is discussed at length in Chapter 13.

The most difficult learning interferences to diagnose are *processing difficulties*. These include:

1. Visual discrimination – The ability to differentiate forms and symbols.
2. Auditory discrimination – The ability to identify the difference between two sounds.
3. Memory – The ability to accurately recall both visual and auditory experiences.
4. Visual sequencing – The ability to recall, in correct sequence, visual information.
5. Auditory sequencing – The ability to recall in correct sequence and detail, auditory information.

Finally, the classroom teacher should keep in mind some other important principles of diagnosis.

1. Diagnosis should be individualized.
2. Diagnosis should consider the whole child.
3. Diagnosis should be specific.
4. Diagnosis should be viewed as an on-going process.

Summary

1. Educational diagnosis is the identification of factors which interfere with learning in children.
2. It begins with observations of a child's behavior.
3. A pattern of failure is a recurring inability to do something which is specified.
4. Five major factors influence poor school learning.
    a. Motivational level
    b. Energy level
    c. Sensory limitations
    d. Appropriateness of task
    e. Processing difficulties
5. Educational diagnosis should be individualized, considerate of the whole child, specific and viewed as an on-going process.

REFERENCES

Chapter 10

Important Concepts About Educational Diagnosis

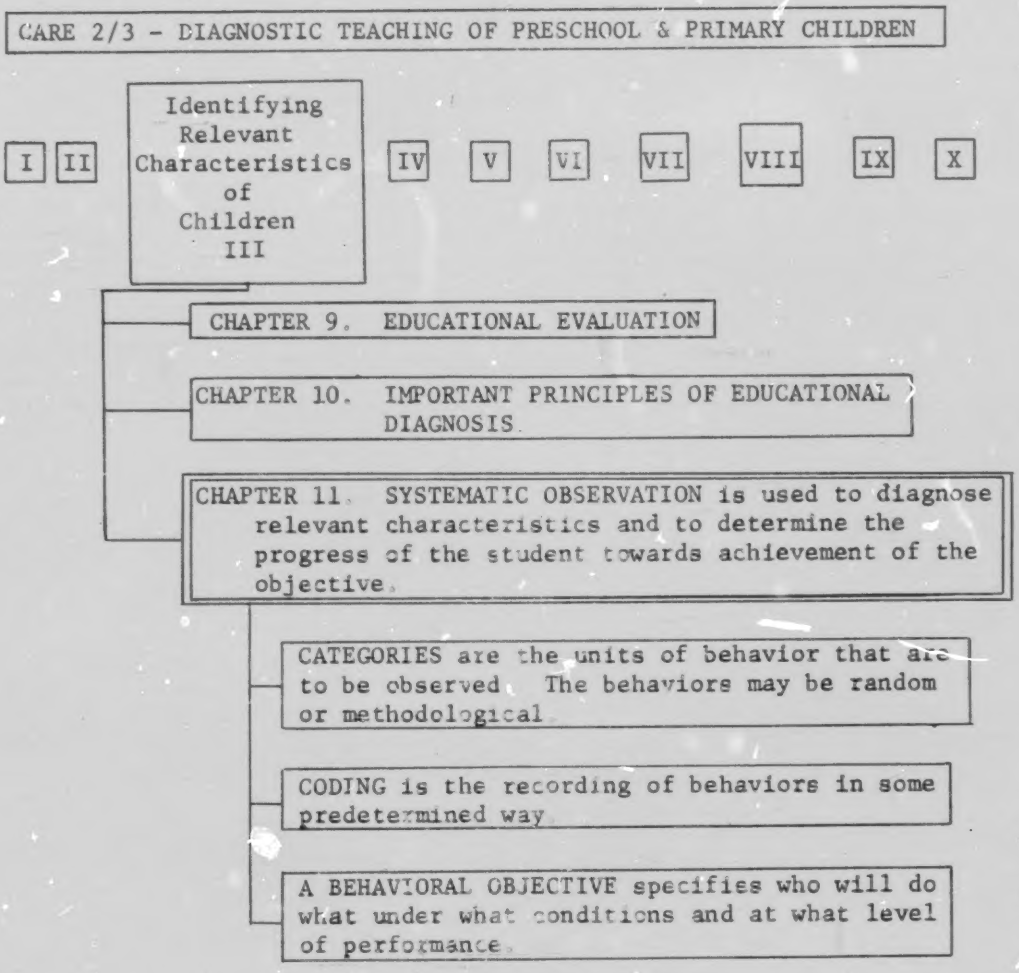
BATEMAN, B. D. An educator's view of a diagnostic approach to learning disorders. In J. Hellmuth (Ed.), *Learning disorders,* Vol 1. Seattle, Washington: Special Child Publications, 1965.

LERNER, J. W. *Children with learning disabilities*. New York: Houghton-Mifflin, 1971.

MYERS, P. I. and HAMMILL, D. D. *Methods for learning disorders*. New York: John Wiley and Sons, 1969.

SMITH, R. *Teacher diagnosis of educational difficulties*. Columbus, Ohio: Charles Merrill, 1969.

VALETT, R. E. *The remediation of learning disabilities*. Palo Alto, California: Fearon, 1967.



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CHAPTER 9. EDUCATIONAL EVALUATION

CHAPTER 10. IMPORTANT PRINCIPLES OF EDUCATIONAL DIAGNOSIS.

CHAPTER 11. SYSTEMATIC OBSERVATION is used to diagnose relevant characteristics and to determine the progress of the student towards achievement of the objective.

CATEGORIES are the units of behavior that are to be observed. The behaviors may be random or methodological.

CODING is the recording of behaviors in some predetermined way.

A BEHAVIORAL OBJECTIVE specifies who will do what under what conditions and at what level of performance.

CHAPTER ELEVEN

SYSTEMATIC OBSERVATION

Teaching is a constant decision making process. To some degree, all teachers observe the behavior of their learners and use these observations in making decisions about their instructional behaviors.

Some of the observations that teachers make are casual and unplanned. In other cases, teachers plan a formal arrangement of collecting information about their learners. This chapter will discuss one type of planned observation – SYSTEMATIC OBSERVATION.

Systematic observation is used at two places in the model of instructional decision making. After the operational objectives have been created to implement educational goals, the behavior of the learners is systematically observed in order to *diagnose their relevant characteristics*. Alternate instructional paths are then created to maximize each learner's movement in the direction of stated objectives. Following the period of instruction, systematic observations are again made to determine each learner's progress toward the *achievement of the objectives*. This information is then used to assess the appropriateness of the objectives for the learners.

One of the first things that must be determined when systematic observation procedures are to be used is the kinds of behaviors to be observed. In addition, it must be decided if teacher behavior or learner behavior, or both simultaneously, will be observed.

Behaviors can be classified according to type: verbal or nonverbal. Verbal behaviors are spoken messages of either a teacher or a learner. Those behaviors which are not audible expressions are examples of nonverbal behaviors. All gestures, body movements, facial expressions and the like are nonverbal behaviors.

Behaviors can be thought of as the atoms of communication. They are the smallest parts of the communication process and they have no meaning until they are linked together. For example, it could be inferred that the teacher in the sample behaviors listed in Example I below intends to support the learner. If it were decided to observe a teacher's *verbal* support of the learners, only verbal instances of supportive behavior would be coded, but the accompanying *nonverbal* behaviors also give clues as to what the teacher is trying to communicate to the learner. Units of verbal and nonverbal behaviors to be observed are called *categories*. In Example I (Plate 11.1) this combination of behaviors is labeled the APPROVAL category.

A behavior category can be defined in the way that is most appropriate for the purpose of the systematic observation. There are times when only a collection of nonverbal behaviors will be used as the definition for a behavior category.

Plate 11.1

EXAMPLE I
BEHAVIOR CATEGORY: APPROVAL

Behaviors

Verbal	Nonverbal
“That is very good, Steve. You were able to use all the pieces of that puzzle.”	Smiles Eye Contact

In addition to observing teacher behavior, behavior categories can also be created for looking systematically at learner behavior. Suppose observation of the strategies used by learners in "solving" a jigsaw puzzle were desired. Some behaviors might be defined as *methodical* and others as *random*. Under the class of methodical behaviors could be listed:

Placing – those instances where the learner picks up a piece, studies its shape, locates that shape on the outlined puzzle board and then places the piece properly on the board.

Fitting – those instances where the learner studies the shape required to fit a second piece to the one that is already placed and then selects and fits the appropriate piece.

Under the class of random behaviors could be listed:

Discarding – those instances where the learner picks up a piece and sets it down again without placing it properly on the outlined puzzle board.

Playing – those instances where the learner manipulates a puzzle piece or pieces in a non-task oriented fashion.

A fifth behavior category is needed to record situations where the learner engages in behaviors which are neither entirely methodical nor entirely random. This class of behaviors will be labelled "Erring."

Erring – those instances where the learner places or fits a piece inaccurately on the outlined puzzle board.

Example II (Plate II.2) shows the five categories which constitute a category system for systematically observing the strategies used by learners in "solving" a jigsaw puzzle. As the teacher observes a learner performing this task, the teacher will record each instance on one of the five behavior categories.

Plate 11.2

EXAMPLE II
CATEGORY SYSTEM

Diagnostic Schedule

1. Placing
2. Fitting
3. Discarding
4. Playing
5. Erring

Doing systematic observations involves coding, the recording of behaviors in some predetermined way. Coding is like using shorthand. Instead of writing out a description of everything that is happening, brief symbols are used to record classroom behaviors. However, unless there is a definite purpose in mind, the mere recording of teacher or learner behavior will have little value. After all, systematic observation is a time-consuming procedure and all the useful information that can be obtained from each observation session should be sought

In the example with the jigsaw puzzle, the five behavior categories might have shown a distribution such as:

Diagnostic Schedule

Categories	Frequency
Placing	2
Fitting	7
Discarding	2
Playing	0
Erring	1

Student: Eloise Gimbel
Date: April 16, 1972
Completion Time: 4 minutes
Task not completed after minutes.

Unless a prior statement of expectations and some theoretical guidelines has been made, this information is of little value. Suppose, however, that the following behavioral objective had previously been established:

> Upon completion of a unit of instruction on shape identification, the kindergarten learners at Paxton School will demonstrate their ability to properly place or fit nine puzzle pieces on the puzzle outline in three minutes or less.

Now Eloise's performance can be interpreted in relation to specific criteria. She did complete the task. She did not complete it in three minutes. She did not lose interest in the task to the point where she played with the pieces.

Furthermore, the behavioral objective gives the basis for selecting other important behaviors that are required for the task. It can be reasoned that one explanation for not completing the task might be indecisiveness on the part of the learner and, therefore, the discarding category is created so that the frequency of times this kind of behavior occurs can be recorded. Another explanation for not completing the task might be a lack of interest on the part of the learner. In order to record instances that indicate a lack of interest, the playing category is included. Finally, those instances where the learner still has difficulty in shape identification should be recorded, so the erring category is included.

In systematic observations the term reliability refers to the ability of an observer to use the category system for accurately coding the classroom behaviors. It is proved when other trained observers record the same classroom events using the same category system.

A few more behavior categories could probably be justified in the category system used in Example II. The number of times the learner asks for assistance or expresses enjoyment or dissatisfaction with the task might be recorded. Adding three categories might make it possible to better justify the interpretation of the data. On the other hand, these additional categories might place too much burden on the observers with the result that the observation would suffer. Too few categories or inappropriate categories will lead to erroneous interpretation of the data.

Parsimony is the term used to describe the desire to reduce the number of behavior categories to the minimum required for a valid interpretation of the data collected. *Validity* is the ability of the category system to collect the amount of quality data needed to make justifiable interpretations about a learner's progress toward stated objectives. The validity of a category system depends on the behavior categories measuring the learner's performance on the stated task and an adequate amount of categories to allow accurate measurement of the task.

Each important objective requires two uses of systematic observation: diagnosis and achievement. Since the purpose of observation for diagnosis (prior to instruction) is different from the purpose of observation of achievement, the two category systems will have to be somewhat different. The category system for diagnosis will include categories which serve as indicators about the reasons for inadequate learning performance, while the achievement category system will include categories which describe the quality of performance after instruction (See Example III – Plate 11.3).

Plate 11.3

EXAMPLE III
CATEGORY SYSTEM

Diagnostic System	Achievement System
1. Placing	1. Placing
2. Fitting	2. Sequential fitting
3. Discarding	3. Non-sequential fitting
4. Playing	4. Searching for sequential fitting
5. Erring	5. Erring

The achievement system contains three behavior categories which carefully describe the kind of "fitting" behavior the learner is engaging in. With these categories, variations in the behavior patterns of the learners who reach the objective can be studied and more information about their performance can be obtained. Discarding and playing were not included in the achievement system because they are diagnostic indicators. This does not mean that the teacher is not concerned about the reasons for inadequate performance after the learner has received instruction. When this occurs, it is the signal for the teacher to switch back to diagnostic observation and recycle the instructional process. In the puzzle example, this would mean that the teacher would supply a different but similar puzzle and observe the learner's performance with the diagnostic system.

Because objectives are tailored by the teacher for learners to fit the goals of the community, the observation systems must also be tailored to fit the objectives. A behavioral objective specifies who will do what under what conditions and at what level of performance.

The following behavioral objective illustrates a simple task:

> Given a red box and a green box and an array of six red blocks of assorted shapes and six green blocks of assorted shapes, the three-year-old child will demonstrate his ability to accurately place all the red blocks in the red box in two minutes or less

When creating a category system for this behavioral objective, judgments need to be made, using the criteria set forth in the behavioral objective, about probable responses of the learner versus possible responses.

The categories might be defined as:

1. Locating – puts red block in red box
2. Erring – puts red block in green box or green block in red box
3. Playing – non-task oriented manipulation of blocks or boxes
4. Rebelling – verbal or nonverbal expression of dissatisfaction about the task

Skill in systematic observation requires a careful and persistent attention to learner behavior As the teacher applies the principles of systematic behavior in the classroom, his skill as an observer will increase and, consequently, the quality of his instructional planning will also improve.

Summary

1. Systematic observation is one type of formal arrangement teachers can use to collect information about their learners
2. It is used at two places in the instructional decision model – to diagnose relevant characteristics of students and to determine the achievement of the objectives
3. Behaviors are classified as verbal and nonverbal
4. Units of a behavior to be observed are called categories. These can be defined in the way most appropriate to the purpose
5. Coding is the recording of behaviors in some predetermined way.
6. Reliability refers to the degree that the recorded behaviors are the same behaviors that other trained observers would record.
7. Parsimony is used to describe the desire to reduce the number of behavior categories to the minimum required for a valid interpretation
8. Validity is the ability of the category system to collect the amount of quality data needed to make justifiable interpretations about the learner's progress
9. A behavioral objective specifies who will do what under what conditions at what level of performance

REFERENCES

Chapter 11

Systematic Observation

AMIDON, E. and HOUGH, J. (Eds.) *Interaction analysis: Theory research and application*. Reading, Mass.: Addison-Wesley, 1967.

FLANDERS, N. *Interaction analysis in the classroom: A manual for observers*. Ann Arbor, Michigan, 1960.

MEDLEY, D. M. and MITZEL, H. E. Measuring classroom behavior by systematic observation. In N. L. Gage (Ed.), *Handbook of research on teaching*, Chicago: Rand McNally, 1963.

OPENSHAW, K. and CYPHERT, T. Categories for a taxonomy of teacher behavior. *Mirrors for Behavior*, 1970, A, 17-18.

ROSENSHINE, B. *Teaching behaviors and student achievement*. England: National Foundation for Educational Research, 1971.

SIMON, Anita and BOYER, G. (Eds.) *Mirrors for behavior, an anthology of observation instruments*. Vol. A , Philadelphia: Classroom Interaction Newsletter, 1970.

SPAULDING, R. Categories for a coping analysis schedule for educational settings (Cases) and Spaulding teacher activity rating schedule (Stars). *Mirrors for Behavior*, 1970, A, 21-22.

WITHALL, J. The development of a climate index. *Journal of Educational Research*, 1951, 45, 93-99.

PART IV

SPECIFICATION OF GOALS AND OBJECTIVES

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

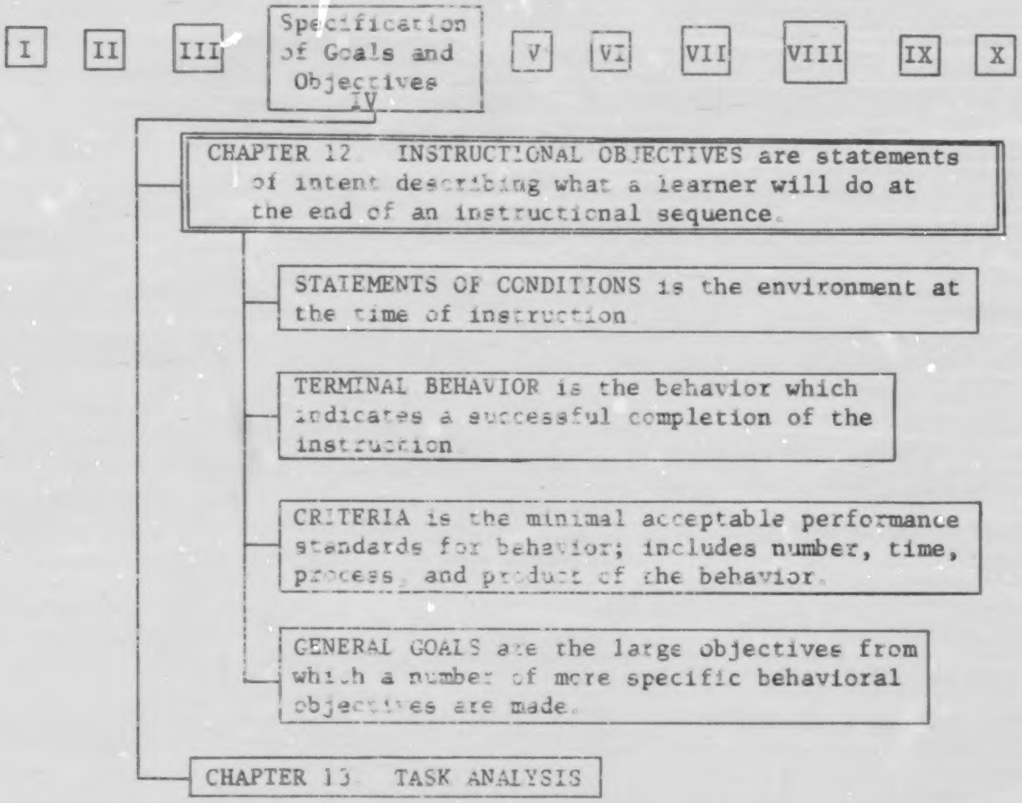
I II III **Specification of Goals and Objectives IV** V VI VII VIII IX X

CHAPTER 12. FORMULATING INSTRUCTIONAL OBJECTIVES

CHAPTER 13. TASK ANALYSIS

PREFACE TO CHAPTERS TWELVE AND THIRTEEN

Now that the relevant characteristics of the child's behavior have been isolated, the teacher is ready to formulate a "plan of attack." That is, he is ready to begin organizing the information he has gathered into general goals towards which the child will work. These goals must then be broken down into behavioral objectives that are used for guiding instruction on a daily or lesson basis. This section describes two approaches to formulating these objectives. Chapter 12 presents instructional objectives, a means of stating what a learner will do at the end of an instructional sequence. Chapter 13 considers Task Analysis, breaking down learning tasks into their component parts to identify necessary skills.



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CHAPTER 12. INSTRUCTIONAL OBJECTIVES are statements of intent describing what a learner will do at the end of an instructional sequence.

STATEMENTS OF CONDITIONS is the environment at the time of instruction.

TERMINAL BEHAVIOR is the behavior which indicates a successful completion of the instruction.

CRITERIA is the minimal acceptable performance standards for behavior; includes number, time, process, and product of the behavior.

GENERAL GOALS are the large objectives from which a number of more specific behavioral objectives are made.

CHAPTER 13. TASK ANALYSIS

CHAPTER TWELVE

INSTRUCTIONAL OBJECTIVES

An instructional objective is a statement of intent describing what a learner will *do* at the end of an instructional sequence. Instructional objectives have 3 basic components: statements of conditions, terminal behavior, and criteria.

Criteria is defined as the minimal acceptable performance standards for the behavior. Criteria provide the test by which teachers measure whether goals have been reached. Four basic criteria statements which teachers' objectives often center around are (1) the *number* of behaviors, (2) the *time* a behavior takes, (3) characteristics of the *process* of performing a behavior and (4) characteristics of the *product* of a behavior.

The *real* objectives of this chapter are as follows:

1. Given a behavior, instructional material or problem, the teacher and her students will write *complete* instructional objectives containing statements of *conditions, terminal behavior* and *criteria*.
2. Armed with several of these complete instructional objectives written by the teacher, students, or teacher and students together, the teacher and students will *use* the objectives to evaluate their progress by determining:
    a. Have the objectives been reached according to stated criteria?
    b. By using behaviorally stated, criterion referenced objectives, have the teacher and students saved any time? Have the objectives kept the class more "on the track" than previous planning methods?
    c. Are objectives reached more rapidly when children can evaluate their own progress by measuring their own work up to concrete criteria?
    d. Do students score higher on tests or get more answers correct on seatwork and homework assignments when given behaviorally stated, criterion referenced objectives to evaluate their own work?
    e. Are objectives reached more rapidly when children help to write their own?
    f. By changing condition statements, can the same objectives be reached more rapidly?
    g. Do different conditions affect the learning rates of students differently?

3. Given some practice using behaviorally stated criterion referenced objectives and the information gathered from objective No. 2 above, most teachers will choose to use these objectives daily, for each lesson taught.
4. After using behavioral instructional objectives daily, teachers will quickly structure tests on chapters and units by testing all previously written objectives according to their stated criterion for that learning sequence.

If the teachers taking this course could reach criterion level on these 4 objectives, they would have (1) heightened efficiency, seeing which methods of teaching, planning, and evaluating are most profitable under which conditions and for which children as well as (2) taught their students to keep their eyes on where they're going, teaching them to plan and evaluate their own learning. Children trained to plan, look at and evaluate their own learning, learn not only the subject matter taught but a valuable tool for planning and evaluating their lives.

These 4 easy steps will help the teacher achieve the objectives listed above.

STEP 1: PLAN A LESSON TO TEACH THE CLASS ABOUT INSTRUCTIONAL OBJECTIVES

When planning this lesson write complete instructional objectives containing *conditions, terminal behaviors*, and *criteria*.

At the beginning of the lesson, tell the class what the objectives are. (List on board; pass out dittoed list, if there are only a few, teach them; for younger children, act them out, or say them a few times, asking children to fill in the blanks). *Stress criteria.*

While teaching the lesson, evaluate while the instruction is in progress. *Stress criteria.*

Evaluate at the end of the lesson *with the class*. (List results on board, act them out with younger children or devise a fingerplay to illustrate).

Were all criteria met? Some? How many? For how many students? How close did others come?

STEP 2: TEACH A LESSON AS USUAL

See how much time it takes.

Measure quality of learning. (How many correct answers on seatwork assignment? Incorrectly read words on a page? Times fallen off a balance beam? etc.)

Next day teach a comparable lesson: What can be gained by writing objectives and using them with the students?

See how much time it takes.

Measure the quality of learning. (How many correct answers on seatwork assignments? Incorrectly read words on a page? Times fallen off a balance beam?)

STEP 3: BEGIN USING BEHAVIORAL OBJECTIVES DAILY WITH STUDENTS IN ALL SUBJECT AREAS.

Keep a record of how often objectives are used with the class to plan and evaluate. Watch the rate of use *grow* to meet the criteria.

STEP 4: WRITE FIRST TESTS USING INSTRUCTIONAL OBJECTIVES. TEST EACH OBJECTIVE IN THE UNIT OR CHAPTER. HAVE STUDENTS MET CRITERIA?

After meeting objectives 1 to 3, this comes easily. Teachers will wonder "How could I ever have taught or tested any other way?"

General Goals

The child will get ready for school.

Related Behavioral Objectives:

putting on socks
putting on shirt
zipping jacket
tying shoelaces

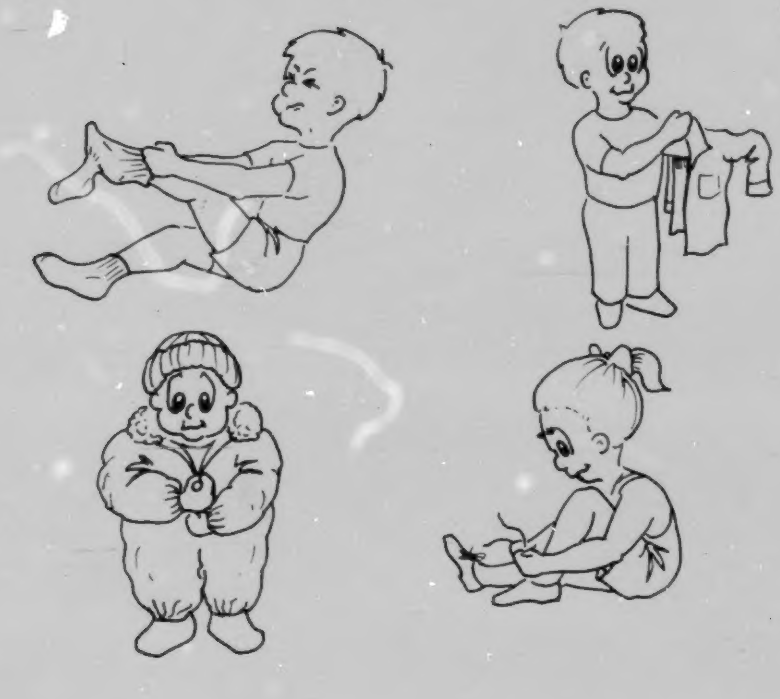

Plate 12.1. BEHAVIORS RELATED TO GETTING READY FOR SCHOOL.

Summary

1. A behavioral objective is a statement of intent describing what a learner will do at the end of an instructional sequence.
2. The three basic components of behavioral objectives are *statements of conditions, terminal behavior* and *criteria* (minimal acceptable performance standards).
3. Criteria are stated in terms of:
   a. number of behaviors
   b. time a behavior takes
   c. characteristics of the process of performing a behavior
   d. characteristics of the product of a behavior
4. Proper and successful use of behavioral objectives results in heightened efficiency for the teacher and training in planning and evaluating for the student.

REFERENCES

Chapter 12

Formulating Instructional Objectives

GRONLUND, N. E. *Stating behavioral objectives for classroom instruction.* New York: Macmillan, 1970.

KAPFER, Miriam B. *Behavioral objectives in curriculum development.* Englewood Cliffs, N. J.: Educational Technology Publications, 1971.

KEMP, J. E. *Instructional design: A plan for unit and course development.* Belmont, California: Lear Siegler, Inc., 1971.

KIBLER, R. J., BARKER, L. L., and MILES, D. T. *Behavioral objectives and instruction.* Boston: Allyn and Bacon, Inc., 1970.

LINDVALL, C. M. (Ed.) *Defining educational objectives.* Pittsburgh: University of Pittsburgh Press, 1964.

MAGER, R. F. *Preparing instructional objectives.* Palo Alto: Fearon, 1962.

MAGER, R. F. *Analyzing performance problems or 'you really oughta wanna.'* Belmont, California: Lear Siegler, Inc., 1970.

PLOWMAN, P. D. *Behavioral objectives.* Chicago: Science Research Associates, Inc., 1971.

PAYNE, D. A. *The specification and measurement of learning outcomes.* Waltham, Massachusetts: Blaisdell Publishing Company, 1968.

POPHAM, W. J. *Evaluating instruction.* Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1973.

POPHAM, W. J. and BAKER, Eva I. *Establishing instructional goals.* Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1970.

POPHAM, W. J. and BAKER, Eva I. *Planning an instructional sequence.* Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1970.

POPHAM, W. J. and BAKER, Eva I. *Systematic instruction.* Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

VARGAS, J. S. *Writing worthwhile behavioral objectives.* New York: Harper and Row, 1972.

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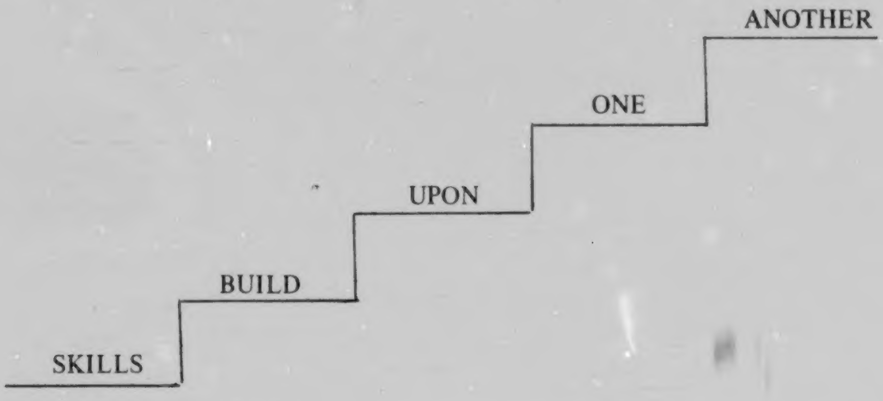
- CHAPTER 12. INSTRUCTIONAL OBJECTIVES
- CHAPTER 13. TASK ANALYSIS is breaking down learning tasks into their component parts to identify necessary skills.
  - A hierarchy of skills is established and used to insure sequencing of instruction.
  - Enroute or enabling behaviors are the prerequisite skills necessary for successful completion of terminal behavior.
  - Entry behaviors are the enroute behaviors a child can already perform.

CHAPTER THIRTEEN

TASK ANALYSIS

Task analysis involves breaking down learning tasks into their component parts so that the skills involved in performing the task can be identified. Also, prerequisite skills (skills that the child must have before he can successfully perform another behavior) must be identified. This notion of necessary or prerequisite skills is found in the statement: LEARNING IS CUMULATIVE.

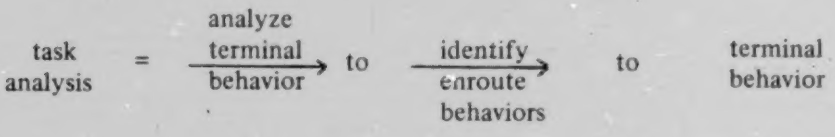


There is quite obviously a relationship between an ordered set of intellectual skills and the presentation of a sequence of instruction. This chapter concentrates on analyzing learning tasks into the behaviors the learner must perform so that the learning hierarchy can be applied to the classroom situation. Once an appropriate behavioral objective for the student has been defined, it must be determined whether the child possesses the prerequisite skills necessary to achieve the criterion. Task analysis is a procedure used to determine these skills to insure the proper sequencing of instruction and the diagnosis of special needs.

Sequencing Instruction

Writing objectives correctly is an important step in task analysis because precise objectives are necessary for precise sequencing of instruction. A well-written objective for a task contains a condition, a criterion and a terminal behavior. In breaking down a task into its component parts, it is important to remember that regardless of the approach to the task analysis, no essential step may be omitted.

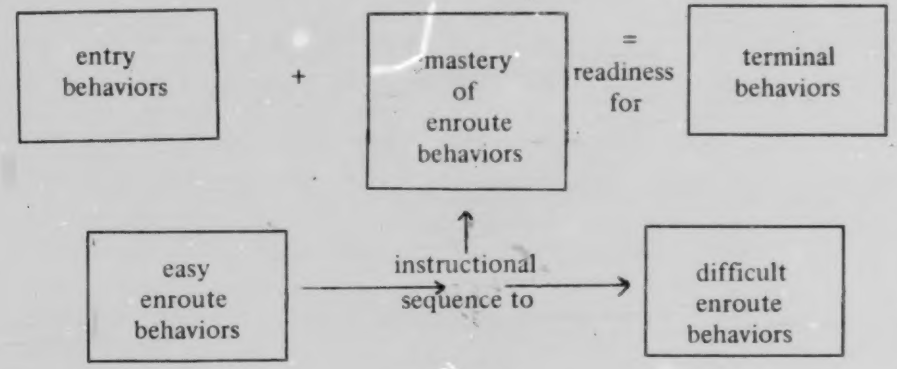
Enroute or *enabling* behaviors are the prerequisite skills necessary for the successful completion of a terminal behavior. The identification of enroute behaviors is accomplished by working backwards from the terminal behavior asking: What skills must the child have in order to perform this task?


task analysis
=
analyze terminal behavior
to
identify enroute behaviors
to
terminal behavior

By working backward from the terminal behavior and identifying the prerequisite enroute behaviors, a hierarchy of skills is built. The implication of the task analysis for instructional sequencing is quite obvious. If a child can perform none of the enroute behaviors in the hierarchy, he should be taught the easiest behaviors first. Instruction must begin at the child's level in the skill hierarchy.

Determining whether the learner is ready to learn a new task or begin the next level of instruction is an important aspect of sequencing instruction. Task analysis has a very practical way of defining *readiness* – when a child has mastered the prerequisite skills then he is *ready* to learn a particular task (perform the terminal behavior).

Once a set of enroute behaviors has been established for a particular terminal objective, the enroute behaviors a child already can perform must be determined. These are called *entry* behaviors. Readiness for a task is determined by the entry behaviors and enroute behaviors a child has for a particular task. When a child has mastered the prerequisite skills (can perform all the enroute behaviors), then he is ready to learn a particular task.


entry behaviors
+
mastery of enroute behaviors
=
readiness for
terminal behaviors
easy enroute behaviors
instructional sequence to
difficult enroute behaviors

Relating Goals and Objectives

General goals and behavioral objectives are two useful types of objectives to use in planning instruction. General goals can be divided into a number of different behavioral objectives.

In relating behavioral objectives to general goals the primary criteria is that the behavioral objectives make sense as being ways of showing that the general goal is being achieved.

The behaviors stated above are related to the general goal and complete behavioral objectives could be written for each. Of course, there are many more behavioral objectives which could be written related to the general goal of getting ready for school.

Teachers can use general goals to pinpoint those general areas on which instruction will focus. Related behavioral objectives enable the teacher to specify a number of alternative behaviors for which specific instructional plans can be made.

Summary

1. Task analysis involves breaking down learning tasks into their component parts so that skills involved in performing the task can be identified.
2. Precise objectives are necessary for precise sequencing of instruction.
3. Enroute or enabling behaviors are the prerequisite skills necessary for the successful completion of a terminal behavior.
4. Entry behaviors are enroute behaviors a child can already perform.
5. When a child can perform all the enroute behaviors he is ready to learn the terminal behavior.
6. A general goal is used to pinpoint a general area of focus for instruction and must be kept in mind when writing related behavioral objectives.

REFERENCES

Chapter 13

Task Analysis

GAGNE, R. M. *Conditions of learning*. 2nd edition, New York: Holt, Rinehart and Winston, 1970.

KAPFER, Miriam B. *Behavioral objectives in curriculum development*. Englewood Cliffs, N.J.: Educational Technology Publications, 1971.

KEMP, J. E. *Instructional design: A plan for unit and course development*. Belmont, California: Lear Siegler, Inc., 1971.

KIBLER, R. J., BARKER, L. and MILES, D. T. *Behavioral objectives and instruction*. Boston: Allyn and Bacon, Inc., 1970.

MAGER, R. F. *Preparing instructional objectives*. Palo Alto: Fearon Publishers, 1962.

MAGER, R. F. *Analyzing performance problems or 'you really oughta wanna.'* Belmont, California: Lear Siegler, Inc., 1970.

PLOWMAN, P. D. *Behavioral objectives*. Chicago: Science Research Associates, Inc., 1971.

PAYNE, D. A. *The specification and measurement of learning outcomes*. Waltham, Massachusetts: Blaisdell Publishing Company, 1968.

POPHAM, W. J. *Evaluating instruction*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

POPHAM, W. J. and BAKER, Eva I. *Establishing instructional goals*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

POPHAM, W. J. and BAKER, Eva I. *Planning an instructional sequence*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

POPHAM, W. J. and BAKER, Eva I. *Systematic Instruction*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

PART V

INSTRUCTIONAL PROCEDURES

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV

Instructional
Procedures
V

VI VII VIII IX X

CHAPTER 14. FACTORS TO BE CONSIDERED IN PLANNING INSTRUCTION

CHAPTER 15. BEHAVIOR MODIFICATION

CHAPTER 16. OPEN EDUCATION

CHAPTER 17. COMPARISON OF BEHAVIOR MODIFICATION AND OPEN EDUCATION

PREFACE TO CHAPTERS FOURTEEN, FIFTEEN, SIXTEEN, AND SEVENTEEN

The teacher who has established specific goals for a child must then select appropriate instructional procedures. This section first suggests a number of factors that must be considered when selecting a teaching strategy, and then presents two contrasting methods: Behavior Modification and Open Education. The chapters are not designed to convert the teacher, but to expose him to these different approaches and to stimulate some self-evaluation of his own methods.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV **Instructional Procedures V** VI VII VIII IX X

- CHAPTER 14. FACTORS TO BE CONSIDERED IN PLANNING INSTRUCTION
  - The specified task may suggest limitations and new possiblities in the selection of a teaching strategy.
  - Characteristics of the child include the motivational and energy levels, the sensory limitations, and processing difficulties.
  - Classroom activities should be considered. The four types are: practice for student, presentation of lesson, classroom control techniques, and evaluation procedure.
  - Materials selection is determined by the task, the individual child, and the planned activities.
  - Administrative details often limit the other four factors.
- CHAPTER 15. BEHAVIOR MODIFICATION
- CHAPTER 16. OPEN EDUCATION
- CHAPTER 17. COMPARISON OF BEHAVIOR MODIFICATION AND OPEN EDUCATION

CHAPTER FOURTEEN

FACTORS TO BE CONSIDERED IN PLANNING INSTRUCTION

In the Diagnostic Teaching Model, the characteristics of the child are identified and then teaching goals are specified. The next step is to select appropriate instructional strategies from all those possible. Since all the possible strategies and the situations in which they are most appropriate cannot be covered in this course, five factors are discussed which are important to consider in planning instruction: (l) the specified task, (2) the characteristics of the child, (3) classroom activities, (4) instructional materials, and (5) administrative details.

An instructional strategy is a plan for a series of acts by either the teacher, the learner or both.

Task

The previous step in the teaching model has provided a set of enroute and terminal behavioral objectives. (For quick review see Chapter 12.) These constitute the task. The nature of the task may suggest both limitations and new possibilities in the selection of a teaching strategy. For instance, the type and mode of the response to be made by the child might indicate that certain materials and certain methods of presentation are more appropriate than others. One would probably teach color discrimination differently than a social response such as sharing.

Characteristics of the Child

Individualizing instruction is a central concept in the Diagnostic Teaching Model. To individualize means to find the best match between the instructional strategy and the characteristics of the child. The diagnostic information gathered on a student may show a pattern of characteristics which have implications for planning.

In diagnosis, one looks for four types of patterns in the characteristics of the child: (l) motivation, (2) energy level, (3) sensory limitations, and (4) processing difficulties. Each of these must be taken into account when selecting the components of the instructional strategy. What one child will work on for 40 minutes unassisted, another child will tire of in five minutes. Sensory limitations may indicate the need for a change in the sensory mode of instruction or in the type of materials to be used. Certain processing difficulties require that the task be broken down further than is usual.

Activities

The activities of both the teacher and the student during instruction should be planned to be made more effective. At least four types of activities should be considered: (l) practice for the student, (2) presentation of lesson, (3) classroom control techniques, and (4) evaluation procedure.

Practice is essential in learning and mastering a task. To be effective, though, practice must be followed by *knowledge of progress,* telling the student how he is doing. There must be *adequate* practice so that the student can master the criterion behavior stated in the behavioral objective. At least some practice should be *equivalent* to, similar to, the stated behavior. On the other hand, practice can be *varied* to make a task easier or more interesting.

There are many possible ways to present a given lesson. In the context of the task, child's characteristics, and resources at hand, a judgment is made as to the best overall strategy, and then *specific* steps to be used are worked out. The appropriate strategy is one which best matches the constraints set by the other factors.

Classroom control can be made more effective by developing and using a variety of control techniques. Experience shows that any single method loses its effectiveness when over used. For the little incidents, one of the following might be useful:

Signal. A facial expression, physical gesture, or other sign to get the student's attention with a minimum of class disruption.

Humor. A witty remark by the teacher can often steal the show.

Ignoring. Ignoring the child works on attention seekers.

Out of sight. Removing the child quietly until self control is regained.

Encouragement. A few encouraging words during periods of good behavior.

For more long-term control, try these:

Geography. Changes in the geography of the room (seating order, work areas, windows).

Man to man. A serious talk.

Reward. A reward system for desired behaviors in contrast to punishment for unwanted behaviors.

Evaluation tells you when the student has reached the terminal objective. It is useful to have the procedure outlined and necessary materials available.

Materials

Although planning does not begin with the instructional materials, it must take them into account. There are at least three considerations in choosing among available materials: the specified task, how it is to be taught, and the child's characteristics. A lesson in arithmetic might require a set of blocks in one case and art materials in another.

Administrative Details

Administrative details are common headaches such as time, resources, and school policy. Too often these place limitations on the instructional strategy.

Summary

Five main factors are important to consider in planning instruction:

1. *The specified task.* Identify the limitations and possibilities in the enroute and terminal behavioral objectives.
2. *The characteristics of the child.* Find the best instructional strategy in order to achieve individualization.
3. *Classroom activities.* Include practice for student, presentation of lesson, classroom control techniques and evaluation procedures.
4. *Instructional materials.* Consider task, how it's taught and child's characteristics.
5. *Administration details.* Consider common headaches such as time, resources and school policies.

REFERENCES

Chapter 14

Factors to be Considered in Selecting Instructional Procedures

BERLINER, D. C. and CAHEN, L. S. Trait-treatment interaction and learning. *Review of Research on Education*. Itasca, Illinois: F. E. Peacock Publishers, Inc., 1973, 58-94.

BUSHELL, D. J. *Classroom behavior*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1973.

DELL, H. D. *Individualizing instruction*. Chicago, Ill.: Science Research Associates, 1972.

FLORIDA STATE UNIVERSITY. Department of Habilitative Sciences, Tallahassee, Florida, 1972.

GAGNE, R. M. Learning and instructional sequence. *Review of Research on Education*. Itasca, Illinois: F. E. Peacock Publishers, Inc., 1973, 3-33.

MERRILL, M. D. and BOUTWELL, R. C. Instructional development methodology and research. *Review of Research on Education*, Itasca, Illinois: F. E. Peacock Publishers, Inc., 1973, 95-131.

PETER, L. J. *Individual instruction*. New York: McGraw-Hill, 1972.

POPHAM, W. J. and BAKER, Eva I. *Classroom instructional tactics*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972.

POPHAM, W. J. and BAKER, Eva I. *Planning an instructional sequence*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

POPHAM, W. J. and BAKER, Eva I. *Systematic instruction*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

REDL, F. and WATTENBERG, W. W. *Mental hygiene in teaching*. New York: Harcourt Brace, 1959.

REYNOLDS, M. C. and BALOW, B. Categories and variables in special education. *Exceptional Children*, 1972, 38, 357-366.

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- CHAPTER 14. FACTORS TO BE CONSIDERED IN PLANNING INSTRUCTION
- CHAPTER 15. BEHAVIOR MODIFICATION is a way of systematically looking at the consequences of behavior and then organizing the consequences so that desired behaviors will increase and undesirable behaviors will decrease.
  - Observe and take baseline.
  - Specify a target behavior including criterion.
  - Select reinforcers.
  - Implement selected strategy.
  - Evaluate change that occurs.
  - Establish reinforcement schedule.
- CHAPTER 16. OPEN EDUCATION
- CHAPTER 17. COMPARISON OF BEHAVIOR MODIFICATION AND OPEN EDUCATION

CHAPTER FIFTEEN

BEHAVIOR MODIFICATION

Behavior modification is a way of systematically looking at the consequences of behavior. It offers a method for providing rewards or arranging consequences in such a way that desired behaviors will occur more frequently, or undesired behaviors will decrease in frequency. It is based on the premise that behavior is influenced by its consequences.

Behavior modification involves using the consequences of behavior to:

1. Strengthen desired behaviors
2. Shape new behaviors
3. Eliminate undesired behaviors

There are six basic steps to follow when modifying a behavior:

1. Observe and take baseline (the frequency of a behavior *before* any modification strategy is used).
2. Specify a target behavior including criterion.
3. Select reinforcers.
4. Implement selected strategy.
5. Evaluate change that occurs.
6. Establish reinforcement schedule.

Thus, behavior modification should be seen as a strategy to use in diagnostic teaching because reinforcement is used to increase or maintain the frequency of behavior.

Frequency. Frequency is the number of times a behavior occurs in a stated time interval.

Reinforcer. A reinforcer is any event following a behavior that increases or maintains the behavior.

Learning. Learning is a countable, measurable change in behavior that occurs as a result of reinforced experience.

It must be remembered that reinforcement does not *cause* a behavior, but it makes it more probable that it will occur. Since the same event may or may not increase or maintain the behaviors of two people, there is no inclusive list of reinforcing events. A teacher often must use trial and error with the child to determine what reinforcement will produce the desired change.

To test the success of reinforcement:

1. Choose a behavior.
2. Count it (baseline) for five days.
3. Choose a reinforcer.
4. Follow the behavior with the reinforcer for five days, counting behavior frequently.
5. Look at the frequencies.

If the frequency has increased or a high-frequency has been maintained, then the event is a reinforcer.

There are a number of consequences that can be tested as reinforcers.

1. *Attention* and *social reinforcers*

Attention (smile, wink, nod, eye contact, touch, praise or any combination) is often a powerful reinforcer. Some children, however, may not change their behavior when shown attention. In these cases, attention is not a reinforcer.

On the other hand, if attention, such as constantly correcting, criticizing or quieting a child, leads to an increase of undesirable behavior, then the attention is reinforcing a poor behavior. This result is determined through careful observation and counting of behavior occurrences.

An important rule when using attention and social reinforcers is: *praise the behavior*, not the child. Example: "I like the way you tied your shoes; good and tight." Not "Good boy!" There are no good or bad children, only good or bad behaviors.

2. *Food reinforcers*

When working with very young children, attention and social reinforcers might not work right away. When tested, food is usually found to work, especially tiny bits like minature marshmallows, jelly beans, raisins or cereal. Food as a reinforcer, however, can become somewhat costly and inconvenient if used over a long period of time. Needless to say, tiny bits of food probably would be a more effective reinforcer *before* a big meal than after! Food should be used with praise, attention or social rewards and gradually phased out until attention or social reinforcers function on their own as reinforcers.

3. *Knowledge of results as reinforcers.*

As stated in the chapter on instructional objectives, using criteria to evaluate their own rate of learning often has a positive effect on children's learning rates. Therefore, giving children criteria against which to evaluate their learning and teaching them to count and chart their own behaviors allows them to watch their own change and growth, and often functions as a reinforcer.

4. *Activities as reinforcers.*

The Premack Principle states that high-frequency behaviors, when they immediately follow low-frequency behaviors, function to increase the frequency of the previously low-frequency behaviors. Thus, high-frequency behaviors work as reinforcers. Some of these might include:

doll playing
playing checkers
playing music
singing
making music
carpentry
drawing
playing house
playing soldiers
walking
running
bicycling
hiking
camping
riding
looking out window
watching tv
getting dirty
reading comics
playing hookie
baking cookies
playing marbles
hiding things

Not only those listed above, but *all* high-frequency behaviors can be used following low-frequency behaviors, like seatwork or independent reading and math sheets, to increase their frequencies.

An important rule when testing and using activities as reinforcers is: reinforcers are given *only* after a terminal behavior is *seen* and has met *stated criteria.*

5. *Token economies as reinforcers*

Often, when it is not possible to present food, an activity or a game as an immediate reinforcer, tokens or points are immediately given to children *along with* social reinforcers. At one or two specified times later in the day, children are allowed to cash in their tokens or points for their choice of reinforcers. In a token economy, reinforcers have "price tags" ranging from very small to very large amounts of points or tokens, so that all children can afford one or more reinforcers, depending on what each has learned.

An important rule when using *all* kinds of reinforcers is: reinforcers that are frequently and repeatedly used often lose their reinforcing value after a time. To make sure this does not happen, the teacher should change his pool of reinforcers regularly, making some inaccessible for a time.

Try out. Try out means that everytime a child exhibits the behavior stated in the objective, he is reinforced. The rate of behavior is determined by the rate of reinforcement. A *reinforcement schedule* is used to make a behavior more resistant to extinction. When a child's frequency of behavior is at the stated criterion for five days, systematic reinforcement can be stopped. *Withholding* continuous reinforcement is the fastest way to extinguish a behavior.

Punishment can temporarily suppress behavior. Frequently, however, when the punishment is stopped, the punished behavior increases in frequency.

Punishment can act as a reinforcement to a child. A shout or command intended as a punishment may not function as one. The consequence of an event is what it functions as.

Punishment can evoke a variety of emotional behaviors (anger, fear, resentment, frustration) from both the teacher and the student, which often interfere with or put off solution of the present problem behavior.

The only time a teacher should use punishment:

1. To teach a young child no.
2. To save a child from danger.
3. To suppress present behavior temporarily. In rare cases, this may seem the only way to get a child to try an alternative behavior. (BEWARE! The teacher should prepare himself for an increase in frequency of the present behavior when punishment stops).

Behavior Change Program for Beginners

1. Choosing a Behavior

The teacher counts one behavior and records its frequency daily for two, five-day school weeks. The objective is accurate counting. The teacher will find his frequencies here rising daily as he acquires the counting habit. He should continue counting beyond the two week period if he thinks he needs more practice.

The teacher chooses a behavior which:

a. can occur at any time during the day, every day.
b. occurs *at least* six times daily (once each hour to provide him with counting practice.)
c. may be his own behavior.
d. may be one child's behavior.
e. may be the frequency of all classmates who have a behavior in common.

Some suggested behaviors:

"Thank you" said by all	"Thank you" said by him
Smiles given to him by all	Smiles given by him
Blank looks given to him by all	Nagging by him
Compliments given by all to anyone	Raise his voice
One or more children not attending	Repeated instructions
Disruptions to lessons	Lessons completed in time allowed

2. Testing for Reinforcers

If the teacher is working with school-age children, he should test *attention* and *social reinforcers, knowledge of results,* and *activities.*

If the teacher is working with preschoolers and the reinforcers listed above are not working, he should test *food reinforcers.*

3. Accelerating the Frequency of an Existing Behavior

The teacher then chooses a behavior currently seen at a low frequency, which he would like to see increased, (perhaps the number of smiles, compliments or thank you's seen in his classroom daily).

He then follows the 6 steps of a behavior modification project.

4. Decelerating the Frequency of an Existing Behavior

A behavior currently seen at a high frequency, which he would like to see decreased, perhaps the number of disruptions in his classroom daily, or the number of times instructions must be repeated, is chosen.

The 6 steps of a behavior modification project are then followed.

5. Teaching the Student

Now he *teaches his students to count, record and control their own behaviors.*

Students are taught to:

Make a counter

Count and record their own behaviors

Accelerate behavior, and

Decelerate behavior,

choosing their own behavioral objectives and deciding on their own consequences. Learning to evaluate and control one's own life should be a primary goal of education.

Happy Counting,
And Many Pleasant Changes!

Easy Methods of Counting

Counters that a behavior manager *wears* are the only ones recommended. If behaviors are not counted immediately as they occur, they are often forgotten. Running for a pencil and paper or reaching for a chart each time a behavior occurs is inefficient.

Wrist counters are similar to golf counters which are available in most dime stores. One model of wrist counter is available from Behavior Research Company, Box 3351, Kansas City, Kansas 66103.

However, the wrist counters just described have a very basic limitation; they count only one behavior at a time. As the teacher becomes more adept at counting, he might choose to count more than one behavior at a time. Some of the multiple behaviors he might count are:

1. The number of words read incorrectly daily by each of 8 children in 4 different reading groups.
2. The number of incorrect responses to random questions, the number of smiles, and the number of inattentive faces.
3. The number of questions asked and the number of disruptions in addition to the number of times he raises his voice, or someone leaves his seat or asks to go to the bathroom.

A home-made bead counter may be very useful as each counter is tailored to its maker's needs.

The counter in Plate 15.1 could record 8 behaviors at once.

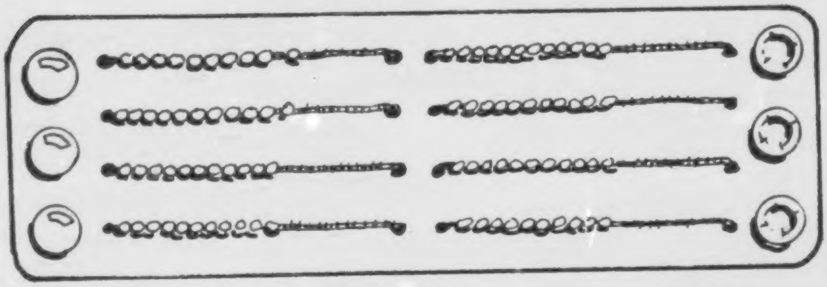

Plate 15.1. SIMPLE, HOMEMADE BEAD COUNTER.

The counter shown in Plate 15.1 can be made easily.

1. A strip of leather (or edge of piece of heavy fabric) is cut about 3 inches wide and 7 ½ inches long (or long enough to wrap around the wrist and snap shut).
2. Snaps are attached at the edges.
3. Sixteen holes are punched through which will be knotted and fastened pipe cleaners (8 on each side).
4. On the 8 pipe cleaners, small beads of a size that will move when pushed but will not slide freely are strung on about 2/3 of each pipe cleaner.
5. Ends of pipe cleaners are stuck through holes in leather or fabric and knotted on the opposite side.
6. Strips of masking or surgical tape are placed over pipe cleaner knots to avoid scratching the wrist.

The bead counter may be varied to the teacher's needs by:

1. Making it wider or narrower, adding or subtracting rows of beads.
2. Dividing the length of each row of beads by 2 or 3, cutting the pipe cleaners in half or thirds to count several behaviors on one row.

Using the Bead Counter

1. At the beginning of every day, put it on, and push all the beads to one side as shown above.
2. Count one behavior on each row of beads (a different color of beads in each row might make this easier) by pushing one bead to the end of the pipe cleaner each time it occurs.
3. At the end of the day or class period, record the number of behaviors counted in each row.

Recording Daily Behavior Counts

Many teachers have created their own systems of recording behavior counts. Probably one of the simplest methods is to ditto a monthly calendar, recording each days count on the calendar. The most sophisticated and standardized procedure has been developed by people at the University of Kansas. It is called the Standard Behavior Chart. (Plate 15.2). It is a logrithmic scale which allows teachers a standardized way of concisely showing 140 days (20 weeks) of daily counts at once. A standard behavior chart is pictured on the next page. All suggested readings with an asterisk (*) explain the use of the Standard Behavior Chart which is available from Behavior Research Company, Box 3351, Kansas City, Kansas 66103.

Summary

1. Behavior Modification is a way of systematically looking at the consequences of behavior and then organizing the consequences so that desired behaviors will increase and undesirable behaviors will decrease.
2. Procedural steps include:
    a. Observe and take baseline.
    b. Specify target behavior including criterion for success.
    c. Select reinforcers.
    d. Implement selected strategy.
    e. Evaluate change that occurs.
    f. Establish reinforcement schedule.

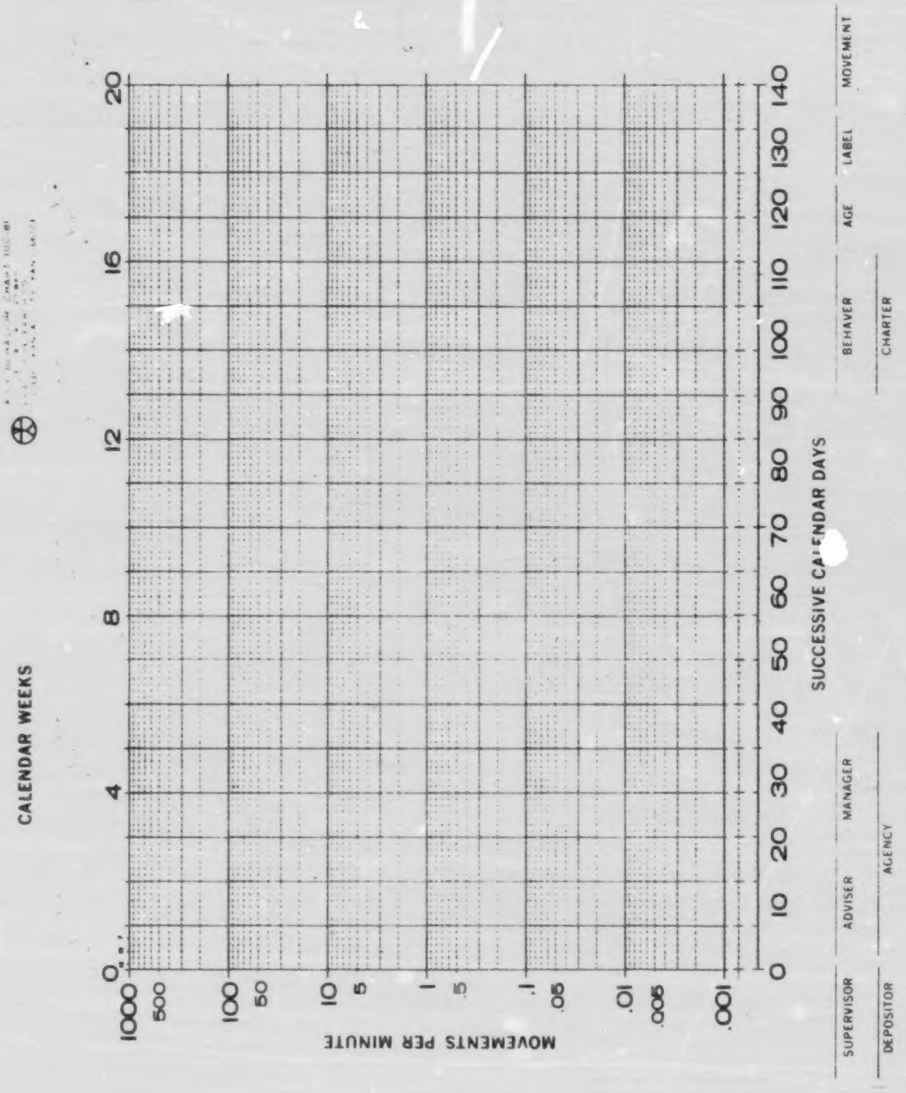

Plate 15.2 STANDARD BEHAVIOR CHART

REFERENCES

Chapter 15

Behavior Modification

COHEN, M. A., HOLTEN, W. J., MARTIN, G. L. and MINGO, A. R. Precision teaching. In H. P. Kunzelmann (Ed.), *Special Child Publications*. Seattle, Washington: Special Child Publications, Inc., 1970.

HALL, R. V. *Managing behavior series: Behavior modification: The measurement of behavior; behavior modification: Basic principles; behavior modification: Applications in school and home*. Lawrence, Kansas: H & H Enterprises, Inc., 1971.

HOLLAND, J. G. and SKINNER, B. F. *The analysis of behavior*. New York: McGraw-Hill, 1961.

KRUMBOLTZ, J. D. and KRUMBOLTZ, Helen B. *Changing children's behavior*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1972.

MEACHAM, M. L. and WIESEN, A. E. *Changing classroom behavior: A manual for precision teaching*. Scranton, Pennsylvania: International Book Company, 1969.

NEISWORTH, J. T., DENO, S. C., and JENKINS, J. *Student motivation and classroom management*. Lemont, Pennsylvania: Behavior Technics, 1969.

PENNYPACKER, A. S., KOENIG, C. H. and LINDSLEY, O. R. *Handbook of the standard behavior chart*. Kansas City, Kansas: Precision Media, 1972.

REYNOLDS, G. S. *A primer of operant conditioning*. Glenview, Illinois: Scott Foresman and Company, 1968.

SHEPPARD, W. C. *How to be a good teacher*. Champaign, Illinois: Research Press, 1972.

TEACHING EXCEPTIONAL CHILDREN. Vol. 3, No. 3, 1971.

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- CHAPTER 14. FACTORS TO BE CONSIDERED IN PLANNING INSTRUCTION
- CHAPTER 15. BEHAVIOR MODIFICATION
- CHAPTER 16. OPEN EDUCATION is a child-centered system in which children are free to determine their own educational experiences and to evaluate their progress and success toward goals.
    - Flexible objectives occur when the teacher encourages and accepts a variety of behaviors by the child.
    - Lack or de-emphasis of peer competition occurs when only those behaviors decided upon by the child are preferred.
    - Multi-age or family groupings mean the age span is more than one year, which increases the potential for different types of behavior.
    - Teacher's attitude toward mistakes means the teacher accepts errors as genuine learning attemps.
    - Transaction is the sum of a child's interaction plus his motivation to continue interacting.
    - Integrated day means each child's transactions are brought together with the environment of the classroom.
- CHAPTER 17. COMPARISON OF BEHAVIOR MODIFICATION AND OPEN EDUCATION

CHAPTER SIXTEEN

OPEN EDUCATION

Open Education is presented as a system of education which is unique because of its beliefs and practices. The beliefs or philosophy of Open Education serve as guidelines for the planning and operation of Open Education classrooms. The system is child-centered – children are free to determine their own educational experiences and to evaluate their progress and success toward goals.

The terms open and education are defined in ways which are peculiar to their use in Open Education systems and in ways which help to explain the beliefs underlying Open Education classrooms.

Open. While open is generally used as an adjective to describe how something looks, in the beliefs of Open Education the word is used as a process term. *Opening* describes what teachers try to facilitate in children. The children in the Open Education classroom are the focus of the opening process.

Four factors have been identified as contributing to a classroom atmosphere in which children are opened.

1. Flexible objectives – opening a child means to encourage and accept a variety of behavior.
2. Lack or de-emphasis of peer competition – no one behavior is best or preferred, except if decided upon by the child.
3. Multi-age groupings – age span is more than one year which greatly increases the potential for different types of behavior.
4. Teacher's attitude toward mistakes – opening can be accomplished by increasing the range of possible responses by presenting a positive or uncritical attitude which is accepting of errors as genuine learning attempts.

The presence of these four factors is termed necessary, but not sufficient, for opening to occur. It must be remembered that an opening response for one child may be typical for another child.

Education. Society, or what happens in the real world, provides the blueprint for education in the open classroom. The curriculum of the open classroom is based upon the objects and skills found in everyday life and in one's own neighborhood. Interactions or social contacts between and among children in the open classroom are the same as the social interactions adults during the course of their daily activities. For this reason, it is often referred to as the Real World Classroom.

Two other terms have special meaning in relation to the beliefs and practices of Open Education. These terms have come to represent much of what actually occurs in an Open Education classroom filled with busy children.

Transaction. A child in an open classroom interacts with an object. He becomes interested in that object and wants more information, or wants to continue interacting with that object. A transaction then becomes the sum of his interaction plus his motivation or desire to continue interacting with that object (Plate 16.1).

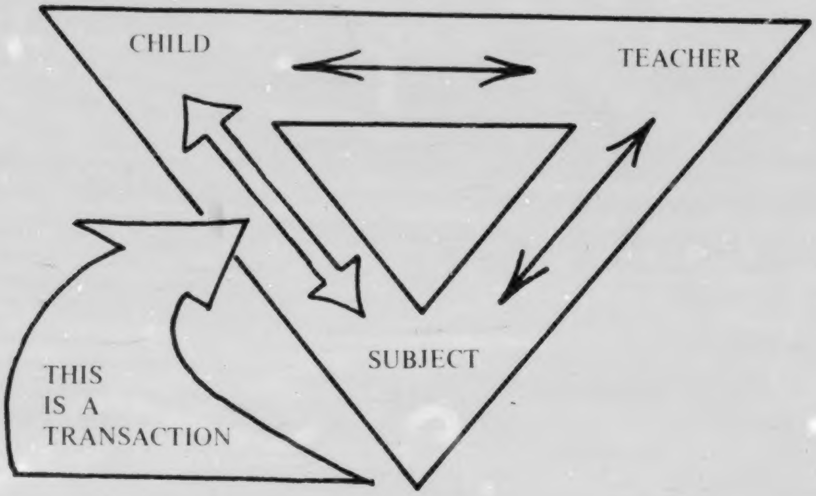

Plate 16.1. TRANSACTION.

TRANSACTION = INTERACTION + MOTIVATION

For example: On a walk outside the classroom a boy spies a pretty red leaf and then a yellow leaf and then a brown leaf. When he gathers them all together he finds they are all the same shape and he wants to know how this can be if they are all different colors. He collects more leaves, looks in books, talks to his father, talks to his teacher and eventually tells a group of his friends at sharing hour what he has found. This entire involvement with the leaves is considered to be a transaction.

A child's experiences in an open classroom can best be described as an ongoing series of transactions.

Integrated day. The sum or bringing together of the open classroom environment through each child's transactions is one way of describing an integrated day (Plate 16.2). Since each child will be involved in different transactions, each child's day will be integrated or brought together in a different way.

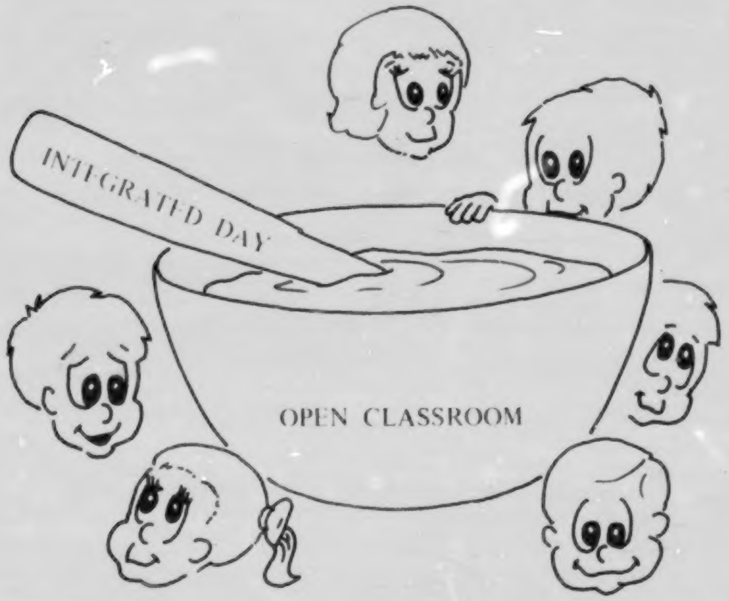

Plate 16.2. INTEGRATED DAY.

Open Education is not a package. It is not a program that can be wrapped up in textbooks and marketed around the country. It is not a model program that others can copy and use in their own classrooms or school districts. Open education is a non-model. One can follow the guidelines and be a true believer, but what the children do in each classroom will be different from what the children do in any other classroom because each child is a unique individual and responds differently.

Open Education is obviously different from the education children are exposed to in a traditional classroom. However, in trying to understand the mechanics of Open Education, some very traditional perspectives can be used to highlight this difference.

Role of curriculum. Open Education operates with objectives that meet the needs and wishes of each child. These are called Flexible Objectives. They are determined by the child through his actions, thus giving the objectives the label "expressed objectives." Children state their goals or objectives through their interactions with their environment. The subject matter of the curriculum comes from the real world activities and materials with which children interact. Open classrooms do not operate on fixed time schedules. There is no "time" for reading, math, etc. Not only are time boundaries lacking, but the distinctions between subject matter are fuzzy, as many different subjects can be part of one transaction.

Role of the teacher. The teacher's role in the open classroom can be summarized:

1. To identify the child's expressed objectives
2. To facilitate transactions

These results in *equilibration*, a shared communication and balance between the teacher and the student.

Open classroom teachers need to be open people themselves. These teachers must have a broad educational background with an understanding of the basic principles in many subject areas. The teacher needs to be an active experimenter in the classroom and bring to teaching a wide set of life experiences. The teacher's attitude towards error is critical in establishing an accepting and warm atmosphere in the classroom.

After a teacher has identified a child's expressed objectives, the teaching task narrows to the facilitating of transactions. The teacher strives to arrange materials and equipment in the classroom to encourage children's transactions. General criteria for room arrangement are 1) to arrange materials in an attractive and appealing manner, 2) to place materials so that children can reach them without adult help, 3) to gradually introduce materials and avoid overwhelming children, 4) to arrange equipment to provide both private and group work space.

CARE 2

books
tables
tables
rug
tools
blocks
animals
water
sand
chairs
art
easels
open area
open area
music area
bench
house area
science area
counter

CARE 3

tables
reading area
writing area
nature area
art area
easels
blocks
tools
math
supplies
teacher's desk
open area
chalk board
water area
measuring area
weighing area
puppets
house
books
music

Plate 16.3. ITEMS TO BE PLACED IN OPEN CLASSROOM.

Role of the child. The role of the child is pivotal in open education. Each child is viewed as a unique individual whose education will differ from that of other children. In the beliefs of Open Education, it is held that children learn in different ways, that children learn best in a rich, stimulating environment, and that children learn best when they initiate transaction

Evaluation of success or progress in Open Education is based upon the child's feelings and his self-esteem. The better a child feels about himself, the more successful the learning experience has been. Children set their own yardsticks of success.

Diagnostic teaching in an open classroom means that the teacher observes and identifies the child's expressed objectives.

Summary

Open Education is a system of education which is unique because of its beliefs and practices:

Teacher is opener

Curriculum is vehicle

Destination is uncharted

Child is explorer

REFERENCES

Chapter 16

Open Education

BANE, M. J. Essay review: Open education. *Harvard Educational Review*. 1972, 42, 273-281.

BUSSIS, A. and CHITTENDEN, E. A. *Analysis of an approach to open education*. Princeton: Educational Testing Service, 1970.

EISNER, E. Instructional and expressive objectives: Their formulation and use in curriculum. In Popham, W. J. et al. *Instructional Objectives*, AERA Monograph Series on Curriculum Evaluation, No. 3. Chicago: Rand McNally, 1969, 1-18.

FISHER, R. J. *Learning how to learn*. New York: Harcourt Brace Jovanovich, Inc., 1972.

HOWSON, G. (Ed.) *Children at school: Primary education in Britain today*. New York: Teachers College Press, 1969.

MacDONALD, J. B. The open school: Curriculum concepts. In Spodek, B. (Ed.). *Open Education*, Washington, D.C.: NAEYC, 1970, 23-38.

METROPOLITAN TORONTO SCHOOL BOARD. *SEF annotated bibliography on open education*. Ontario: Metropolitan Toronto School Board, 1972, ERIC ED 063 619.

MOYER, F. H. *A comprehensive bibliography of open education and open space schools – a reader's guide*. ERIC ED 065 909.

NYQUIST, E. B. and HAWES, G. R. (Eds.). *Open education: A sourcebook for parents and teachers*. New York: Bantam Books, 1972.

RATHBONE, C. H. (Ed.). *Open education: The informal classroom*. New York: Citation Press, 1971.

ROGERS, V. R. English and American primary schools. In Spodek, B. (Ed.), *Open Education*, Washington, D.C.: NAEYC, 1970, 51-63.

ROGERS, V. R. (Ed.). *Teaching in the British primary school*. New York: Macmillan, 1970.

TAYLOR, J. *Organizing the open classroom*. New York: Schocken, 1972.

WEBER, L. *The English infant school and informal education*. Englewood Cliffs: Prentice-Hall, 1971.

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CHAPTER 14. FACTORS TO BE CONSIDERED IN PLANNING INSTRUCTION

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CHAPTER 16. OPEN EDUCATION

CHAPTER 17. COMPARISON OF BEHAVIOR MODIFICATION AND OPEN EDUCATION

The teacher is given an opportunity to produce a third combination system of his own.

CHAPTER SEVENTEEN

COMPARISON OF OPEN EDUCATION AND BEHAVIOR MODIFICATION

Comparing and contrasting two instructional strategies helps a teacher understand the advantages and disadvantages of each system and often results in the production of a third "combination" system especially suited to the teacher's individual needs.

For subscribers to the CARE 2/3 Model for Diagnostic Teaching, selection of an instructional strategy and materials is highly dependent upon the child or children involved. This chapter is designed to help the teacher select instructional strategies by setting up a direct comparison between Open Education and Behavior Modification, two highly contrasting systems. Six dimensions will be compared:

a. role of the child
b. objectives
c. reinforcement
d. role of the teacher
e. classroom arrangement
f. evaluation

Space has been provided after each dimension for the student to make additional distinctions between Open Education and Behavior Modification.

COMPARATIVE DIMENSIONS

1. Role of the child

Open Education	Behavior Modification
Active	Reactive
Choice	Planned response

2. Objectives

Expressed by child	Specified by teacher

3. Reinforcement

Natural	Planned

4. Role of Teacher

Non-directive	Directive

5. Classroom Arrangement

Open spaces	Variety of environments

6. Evaluation

According to child's self-image and growth	According to criterion statements of objective

The teacher should recognize the differences between these two instructional strategies and take advantage of each in choosing and planning instructional strategies to meet his student's needs. To do this the teacher might want to use the checklist below:

CHECKLIST

Write a or b in each blank to show your response.

1. How do I view the child's role in learning?

   a. active ____________
   b. reactive

2. What kind of objectives do I use?
   a. expressed by child ____________
   b. behaviorally stated by school.

3. What teacher role am I most competent and comfortable in?

   a. non-directive ____________
   b. directive

4. What kind of reinforcement can I handle most easily?

   a. natural
   b. planned ____________

5. Can I set up and operate a flexible, open classroom environment?

   a. yes
   b. no ____________

6. Acceptable evaluation procedures in my school are

   a. child's self-image and growth assessment ____________
   b. activities or tests related to objectives

If a teacher's scores are not all "a's" (Open Education) or all "b's" (Behavior Modification), he has just produced a third system based on a recognition of his own individual differences as well as those of his class. Thus, two systems which present contrasting philosophies can be merged to form an individual learning program.

REFERENCES

Chapter 17

Comparison of Open Education and Behavior Modification

References are listed at the end of Chapter 15, Behavior Modification and Chapter 16, Open Education.

PART VI

SELECTION AND RETRIEVAL OF INSTRUCTIONAL PROCEDURES AND MATERIALS

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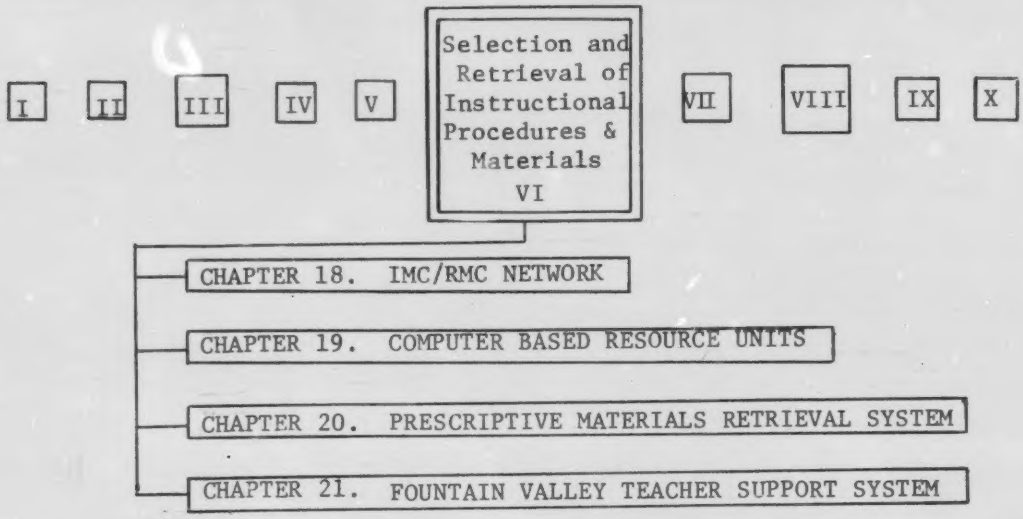
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CHAPTER 19. COMPUTER BASED RESOURCE UNITS
CHAPTER 20. PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM
CHAPTER 21. FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM

PREFACE TO CHAPTERS EIGHTEEN, NINETEEN TWENTY AND TWENTY-ONE

The purpose of the next four chapters is to introduce the teacher to several instructional materials retrieval systems and to provide him with practice in using them in a simulated classroom setting. They are designed to help him successfully accomplish the Selecting Materials step of the Diagnostic Teaching Model.

Although the term *retrieval* system may be new, most teachers have undoubtedly encountered some retrieval systems in their work. A retrieval system is an organized system for getting information about a certain subject. For example, libraries, curriculum materials centers and file drawers are all retrieval systems because they contain a store of information which can be easily reached.

In its simplest form, a retrieval system operates as follows:

1. A need for information arises.
2. It is known that a pool of information exists.
3. Some standardized procedures are followed for surveying the information.
4. The information which helps solve the problem is retrieved.

The mere fact that a teacher can retrieve information on various materials through an organized retrieval system will not automatically help him in his classroom. In the Diagnostic Teaching Model, three steps precede and influence the selection of materials (Identification of Learner Characteristics, Specification of Objective and Selection of Instructional Strategy).

The retrieval systems described in the next four chapters are intended to be used as tools whenever and however the teacher needs to use them. When used correctly, they will help him become aware of and plan for individual characteristics of children as they relate to the selection of instructional materials.

As some of the retrieval systems presently available are reviewed, the teacher should evaluate them with his own needs in mind. The presentation of these retrieval systems is not an endorsement of the products, but rather an attempt to make these systems' existence and operations known to the teacher.

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- CHAPTER 18. NATIONAL NETWORK OF INSTRUCTIONAL MATERIALS AND REGIONAL MEDIA CENTERS
    - Special Educational Instructional Materials Centers (SEIMC or IMC for short) are subdivided into associate centers, which serve the teacher in consultative and supportive roles.
    - Regional Media Centers for the Deaf (RMC) offer extensive preservice and inservice training for teachers of the deaf.
    - Council for Exceptional Children (CEC) Information Center acts as a resource center as well as a coordinator for the entire network.
    - Instructional Materials Reference Center helps teachers locate appropriate materials for visually handicapped children.
    - National Center or Educational Media and Materials for the Handicapped (NCEMMH) is a national agency which develops materials, trains teachers, and delivers services for handicapped children and their teachers.
- CHAPTER 19. COMPUTER BASED RESOURCE UNITS
- CHAPTER 20. PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM
- CHAPTER 21. FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM

CHAPTER EIGHTEEN

NATIONAL NETWORK OF INSTRUCTIONAL MATERIALS AND REGIONAL MEDIA CENTERS

IMC/RMC Network stands for Instructional Materials Centers and Regional Media Centers Network. The IMC/RMC Network resulted from a report by the President's Panel on Mental Retardation established by President Kennedy in 1962. The network was set up to develop materials, disseminate information about instructional materials and train teachers in the use of media and materials.

Today the original two IMC's have expanded to 21 centers. Components are included now which were not mentioned in the original plan. The purpose of the total network is to provide educators with ready access to valid materials and information related to the education of handicapped children.

Instructional Materials Centers

The total network contains several different components. The original concept of the network was based on the idea of having a web of Special Educational Instructional Materials Centers around the country. The centers became known by their initials, either SEIMC or IMC. The IMC's have now matured and play an important role in the education of handicapped children. A list of the centers is included here for reference (Plate 18.1).

Each IMC is responsible for serving a particular region of the country. Since any center may have to serve far more persons than it can handle effectively or a very large and unwieldy geographic area, another type of intermediary center has evolved. These intermediary centers are called Associate Special Education Instructional Materials Centers. There are about 350 of these centers scattered throughout most of the 50 states and U.S. possessions.

These Associate Centers are the ones with which the teacher would probably have the closest contact. A service which the Associate Center cannot provide may be channeled to the Regional Center, but the initial request will be made to the Associate Center. Most states have several of these centers. For the most part, the Regional Centers have become resources which supply information to the Associate Centers upon request or when a new development arises in the field. They are also a resource to state departments and serve as a link to the national network.

INSTRUCTIONAL MATERIALS CENTERS

Region Served	Director
National	Mr. Carl W. Lappin, Director Instructional Materials Reference Center American Printing House for the Blind 1839 Frankfort Avenue, Louisville, Kentucky 40206
Connecticut, Maine Massachusetts, New Hampshire, Rhode Island, Vermont	Dr. John Tringo, Director New England Special Education Instructional Materials Center Boston University 704 Commonwealth Avenue Boston, Massachusetts 02215
Arizona, California, Nevada	Dr. Charles A. Watts, Director Instructional Materials Center for Special Education University of Southern California 1031 South Broadway, Suite 623 Los Angeles, California 90015
Colorado, Montana, New Mexico, Utah, Wyoming	Dr. Willard Jones, Director Rocky Mountain Special Education Instructional Materials Center University of Northern Colorado Greeley, Colorado 80631
National	Dr. Don Erickson, Director CEC Information Center on Exceptional Children (CEC ERIC) The Council for Exceptional Children 1411 South Jefferson Davis Hwy., Suite 900 Arlington, Virginia 22202
Illinois	Miss Gloria Calovini, Director Instructional Materials Center Office of the Superintendent of Public Instruction 1020 South Spring Street Springfield, Illinois 62706
Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota	Dr. Robert Ridgway, Director Special Education Instructional Materials Center University of Kansas 205 W. 9th Street, Suite 5 Lawrence, Kansas 66044
Kentycky, North Carolina, Tennessee West Virginia	Dr. A. Edward Blackhurst, Director University of Kentucky Regional Special Education Instructional Materials Center 641 South Limestone Street Lexington, Kentucky 40506

Plate 18.1. INSTRUCTIONAL MATERIALS CENTERS

INSTRUCTIONAL MATERIALS CENTERS (Continued)

Region Served	Director
Indiana, Michigan, Ohio	Mrs. Lou Alonso, Director USOE/MSU Instructional Materials Center for Handicapped Children and Youth 213 Erickson Hall Michigan State University East Lansins, Michigan 48823
New York State, and Central New York Region	Dr. Shirley Cohen Box 390, Hunter College 695 Park Avenue New York, New York 10021
Western New York Region	Mrs. Elizabeth L. Ayre, Regional Director Regional Special Education Instructional Materials Center State University College at Buffalo 1300 Elmwood Avenue Buffalo, New York 14222
Southeastern New York Region	Dr. Shirley Cohen Box 101, Hunter College 695 Park Avenue New York, New York 10021
Alaska, Hawaii, Idaho, Oregon, Washington, Guam, Trust Territory of the Pacific Islands American Samoa	Dr. Wayne D. Lance, Director Northwest Regional Special Education Instructional Materials Center University of Oregon Clinical Services Building Eugene, Oregon 97403
Arkansas, Oklahoma, Texas	Mr. Albert W. Fell, Director The University of Texas Special Education Instructional Materials Center 2613 Wichita Street, Austin, Texas 78712
Delaware, District of Columbia, Maryland, New Jersey, Virginia, Pennsylvania	Dr. Raymond S. Cottrell, Director Mid-Atlantic Region Special Education Instructional Materials Center George Washington University Washington, D. C. 20006
Minnesota Wisconsin	Dr. LeRoy Aserlind, Director Special Education Instructional Materials Center University of Wisconsin 415 West Gilman Street,
Alabama, Florida, Georgia, Louisiana, Mississippi, South Carolina	Dr. Faye M. Brown, Director Southern States Cooperative Learning Resource System Auburn University at Montgomery Montgomery, Alabama

REGIONAL MEDIA CENTERS

Dr. Robert E. Stepp, Director
Midwest Regional Media Center
for the Deaf
University of Nebraska
Lincoln, Nebraska 68508

Dr. William D. Jackson, Director
Southern Regional Media
for the Deaf
College of Education
University of Tennessee
Knoxville, Tennessee 39716

Dr. Raymond Wyman, Director
Northeast Regional Media
Center for the Deaf
University of Massachusetts
Amherst, Massachusetts 01003

Dr. Hubert D. Summers, Director
Southwest Regional Media
Center for the Deaf
New Mexico State University
P. O. Box 3AW
Las Cruces, New Mexico 88001

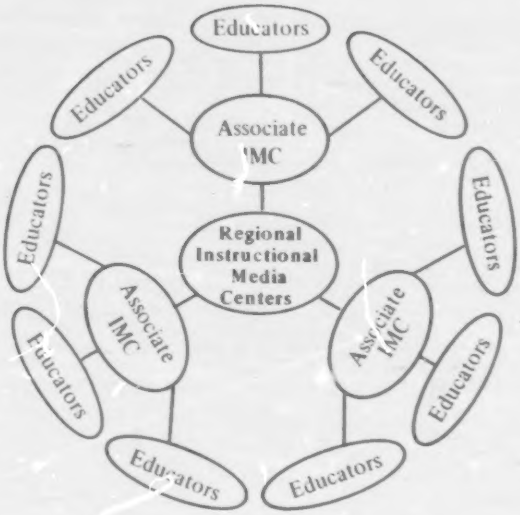
Educators
Educators
Educators
Associate IMC
Educators
Regional Instructional Media Centers
Educators
Associate IMC
Associate IMC
Educators
Educators
Educators
Educators

Plate 18.2. IMC NETWORK.

Function of the Associate Center

The Associate IMC, as its name implies, is a center housing educational materials, both print and non-print. Along with these materials there are personnel trained in using the materials. The center exists to serve the teacher in a *consultative* and *supportive* role.

For example, a teacher can request materials from his Associate IMC to try out on a short-term basis in his classroom. During this time he can evaluate the usefulness of the material. Each time a material is sent out, the teacher using it is asked to evaluate it, and included with the materials he receives from the center are other teachers' evaluations.

Most materials such as professional books, children's games and actual instructional materials are usually loaned out on a short-term basis. Films, filmstrips and multi-media kits also are available for short-term loans.

In order to acquaint teachers with the latest materials, some Associate Centers operate mobile units which bring materials and consultant services to outlying districts. The majority of Associate Centers send out newsletters announcing the new materials they have received. Visitors to the Associate Centers can use house catalogues to scan, locate and select materials.

The list in Plate 18.3 identifies those services offered by *most* Associate Centers.

Plate 18.3.

ASSOCIATE IMC SERVICES

1. Lending new materials and those teachers wish to use before purchase.
2. Lending materials for specific learning problems.
3. Collecting and sharing teacher evaluation of materials.
4. Providing consultative services for planning purposes.
5. Publishing a newsletter describing services.

A teacher is encouraged to write directly to the center that services his area to discover the exact services available to him. To get the address of the Associate Center serving his area, he should contact the center listed for his state.

Points to Remember

Although most of the Regional Centers are called Special Education IMC's and are funded through the Bureau of Education for the Handicapped of the USOE, regular as well as special teachers are encouraged to use the facilities.

Network services are free except for the expense of mailing back materials once they are borrowed. Material requests are generally handled through the Associate Centers. Once the teacher has expressed interest in being placed on the Center's mailing list, he is free to borrow materials in person or by mail, and may take advantage of all other services.

Incidentally, if any student taking this course does contact one of the IMC's, the authors would appreciate it if he would mention the fact that he took the CARE course developed by Penn State and that the course discussed the IMC network. Thanks!

Regional Media Centers for the Deaf (RMC)

The second major component of the IMC/RMC Network is the Regional Media Center for the Deaf (RMC). The RMC's are concerned with changing classroom instruction for the deaf and hearing impaired by designing and developing media and materials, and by training teachers how to work best with pupils. Each of the four centers deals with extensive preservice and inservice training for teachers of the deaf.

Additional important components are as follows:

Council for Exceptional Children Information Center (CEC)

The Council for Exceptional Children Information Center (CEC) collects, indexes, abstracts and stores research information from various sources. The journal *Teaching Exceptional Children* is also produced there. CEC also provides technical assistance to all other centers in the network and maintains a network coordination function.

Instructional Materials Reference Center

The Instructional Materials Reference Center located at the American Printing House for the Blind develops various instructional aids that are used with the visually handicapped and helps teachers locate materials appropriate for the education of visually handicapped children.

National Center on Educational Media and Materials for the Handicapped (NCEMMH)

The National Center on Educational Media and Materials for the Handicapped, at Ohio State University, serves the IMC/RMC Network and handicapped children as a nationally prominent agency. Its functions include developing instructional materials, training and disseminating on the national level and developing a national system to deliver media services to handicapped children and their teachers.

Summary

The National Network of Instructional Materials and Regional Media Centers (IMC/RMC) consists of five major components:

1. Special Educational Instructional Materials Centers (SEIMC or IMC for short)
2. Regional Media Centers for the Deaf (RMC)
3. Council for Exceptional Children Information Center (CEC)
4. Instructional Materials Reference Center
5. National Center on Educational Media and Materials for the Handicapped (NCEMMH)

The centers work together to meet the original objective of developing materials, disseminating information about instructional materials, training teachers in the use of media and materials, and providing a delivery system of media services to handicapped children.

Effective September 1, 1974, the IMC Network is renamed the Area Learning Resource Center Network. The Network consists of thirteen regions throughout the United States. For information about the locations of these centers, write to the Bureau of Education for the Handicapped, 7th and D Streets, S. W., Washington, D. C., 20202.

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- CHAPTER 18. NATIONAL NETWORK OF INSTRUCTIONAL MATERIALS AND REGIONAL MEDIA CENTERS
- CHAPTER 19. COMPUTER-BASED RESOURCE UNITS (CBRU) consist of broad pools of ideas and information which can be adapted by teachers of different grade levels.
  - Teaching units are developed from resource units to prevent fragmentary learning, provide practice, and provide organization for difficult concepts.
  - The C.A.P. Abstract and request form help the teacher select appropriate teaching units.
  - The individual pupil portion of the request form allows the teacher to plan for individual differences.
  - The Computer Based Resource Guide contains content outlines, an activities section, an instructional materials section, and evaluation devices.
- CHAPTER 20. PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM
- CHAPTER 21. FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM

CHAPTER NINETEEN

COMPUTER-BASED RESOURCE UNITS

Resource units include ideas which may be used and adapted by teachers of different grade levels. Essentially they are used for preplanning and are never used by one teacher in their entirety. A resource unit is a broad pool of ideas and information and usually contains:

1. learning outcomes
2. subject mater
3. instructional activities
4. materials
5. measuring devices
6. teacher references

The teacher draws a *teaching unit* from the pool of ideas and activities in the resource unit. Many teachers have never had the opportunity to use resource units simply because there are not many available. It is very time consuming and very difficult to set up lists of materials, methods, etc., which would apply to various topics and various age levels. The major purposes of teaching units are:

1. prevent fragmentary learning
2. provide practice in meaningfully applying tool subject skills
3. provide an organization for teaching certain concepts which would be difficult to teach any other way.

Not all school subjects lend themselves to a unit method of teaching. Generally those subjects which are tool subjects are not taught as separate units. Subjects such as social studies, which deal with broad content, are most amenable to the unit method of teaching.

Unit Construction

There are many approaches to unit construction. Following is a list of suggested steps to use in constructing a unit. Several texts are listed in the bibliography which are good sources for more detailed descriptions of unit construction.

Steps in Constructing a Unit

Justification	1.	A justifiable teaching topic is chosen. A brief statement of the topic is given at the beginning of the unit plan.
Objectives	2.	Objectives for the unit are written. They serve as a guide to what will be taught in the unit and also provide a basis for evaluation. Units typically include objectives which have been tailored to individual students.
Initiating Activity	3.	Unit activities are selected which are compatible with the unit objectives, pupil ability and pupil interest. This means the teacher probably will have different activities for different pupils. These activities are start up activities which will introduce and involve the pupils in the unit.
Developmental Activity	4.	Developmental unit activities are closely tailored to the unit objectives, pupil ability and pupil interest. These activities are the "heart" of the unit.
Culminating Activity	5.	Activities which are appropriate for summarizing and closing a unit are selected.
Evaluation	6.	Pupil achievement is evaluated using the unit behavioral objectives for each child. A second type of evaluation of the unit deals with the success of the unit in preparing the pupils for future learning. This type of evaluation is not easy to carry out.
Bibliography	7.	Sources used in the unit are listed. The purpose of the bibliography is to provide other teachers with enough information to enable them to use and adapt the unit to meet their needs.

CBRU

Computer Based Research Units (CBRU) was developed to meet the needs of busy teachers who have neither access to resource units nor time to construct their own. CBRU takes most of the work out of planning the resource unit. It supplies a guide tailored to the teacher's class and individuals in it.

The CBRU request form contains a list of resource units or guides which have been developed or soon will be. After each title is listed the range of grade levels for which the particular topic is appropriate. See Plates 19.1 and 19.2 for CBRU listing and request form.

To help the teacher be more sure that a unit topic covers appropriate areas, the C.A.P. abstract publication accompanies the planning guide. These abstracts briefly discuss the scope and content of each unit (Plate 19.3).

In addition to reading the unit abstracts, the teacher may send for, free of charge, the objectives of the unit(s) he is interested in. Plate 19.4 is an example of the objectives from the unit "Environment and Public Health."

Requesting Resource Units

With the objectives the teacher will receive a request form. If he decides the unit will help his class, he must complete this form by supplying information which will enable CBRU to construct the unit. See Plate 19.2. Notice that he must fill in the unit title and number. The number is found by the unit title on the initial form (Plate 19.1) and on the objectives list (Plate 19.4).

To supply information about individual pupil characteristics, the teacher will need the Instructional Variables sheet (Plate 19.5). This sheet helps him translate information about his pupils into a code which can be used by the computer. The variables that are coded and used in the CBRU request form are called *descriptors*. These descriptors are the variables used every day in instructional planning. Other examples of Instructional Variables sheets for specific units are given in Plates 19.6 through 19.9.

Mental age. The request form also asks for the range of mental ages in the class. The formula below is used to compute mental age.

$$\frac{CA \times IQ}{100}$$

$$\text{Mental Age} = \frac{\text{Chronological Age} \times \text{Intelligence Quotient}}{100}$$

Individual pupil portion of the form. For each child the teacher is asked to list two individual objectives that he wants him to master. It is from this section that CBRU derives much of its strength. The teacher may specify any objectives he wishes for each child.

Reading level. For the purpose of completing part B of the CBRU request form, there are several methods of estimating reading level.

1. Administer some standardized reading achievement test.
2. Perform an informal reading inventory.
3. Estimate the reading level from the book a child is presently reading.

If the teacher finds a child's reading level falls between two CBRU categories, it is suggested he use the lower category.

CBRU Printouts

After his requests have been analyzed, the teacher will be sent a computer based resource guide (CBRG) (Plate 19.12) which has translated his coded requests into specific recommendations. This is similar to the teaching unit and includes suggestions for the particular class. Facts, statistics, generalizations and definitions related to the unit topic are provided. It is primarily a teacher's resource from which he can draw much of the information necessary to guide the pupils to mastery of objectives. Content outlines are included for each objective – group and individual.

The guide also contains an activities section which is broken down into group and individual objectives.

The instructional materials section includes lists of materials which could be used as actual tools for the activities.

The final section of the guide offers measuring devices the teacher may use to check for mastery of objectives.

CBRU developers recommend that at least two weeks be allowed for the teacher to familiarize himself with the resource guide after it arrives. Since about two weeks should be allowed to receive the guide once it has been sent for, the teacher should order his CBRU about one month before he plans to use it.

Evaluation. Each CBRU guide includes an evaluation form (Plate 19.12). The teacher is requested to fill out and return this form. Currently their are many CBRU units undergoing revision as a result of teacher opinion and evaluations.

Recently the center began publishing "CBRU–gram," which is a newsletter designed to inform users of new developments. Subscribing to the "CBRU–gram" can keep the teacher informed.

Any detailed questions a teacher may have regarding the use of CBRU may be answered by writing:

CBRU
Research and Development Complex
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

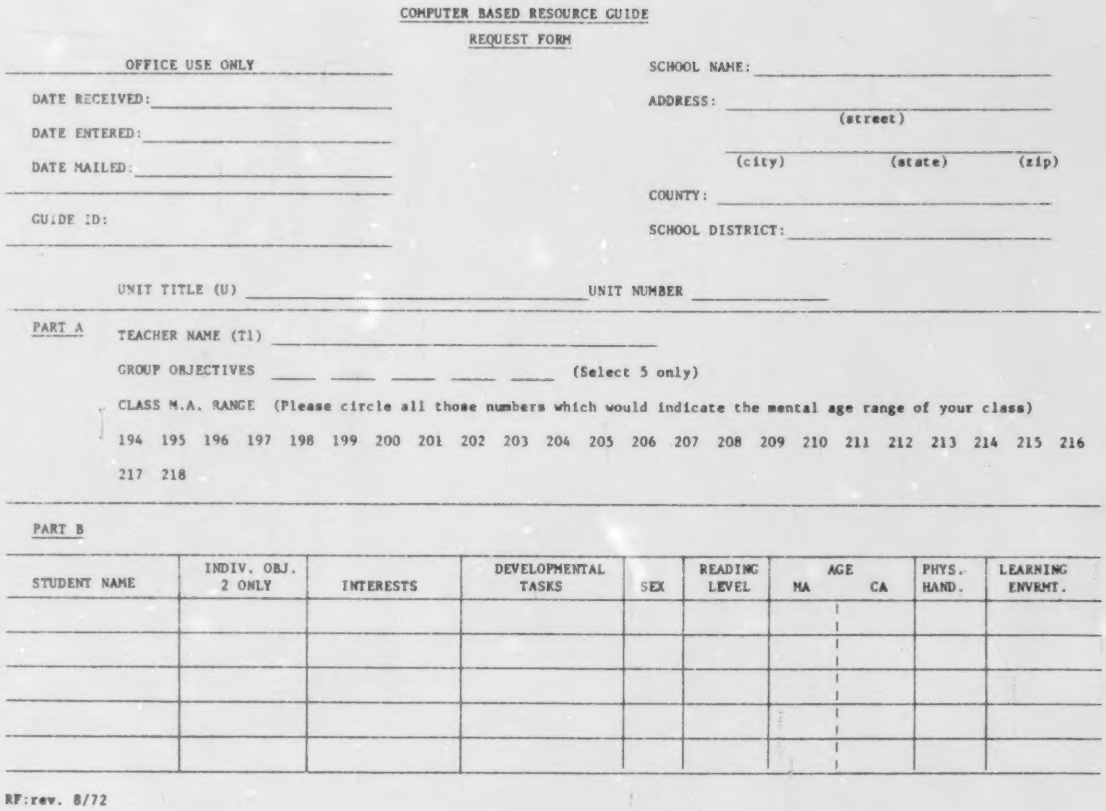
Plate 19.1

COMPUTER BASED RESOURCE UNIT LISTING

January 1973

Unit Title and Number	Approximate Grade Level
Air Pollution (912)	6-11
Alcohol (062)	K-12
American Civil Rights (117)	9-12
American Civilization in Historical Perspective (924)	9-12
American Cultural Revolution (905)	10-12
American People (926)	7-12
Career Education (903)	9-12
Communications (917)	K-6
Communities of Man (927)	4-9
Conservation (916)	4-10
Consumer Health (069)	4-12
Dental Health: Health Status (058)	K-9
Disease Prevention and Control (060)	K-12
Drugs (063)	K-12
Ecology and Epidemiology (066)	7-12
Environment and Public Health (065)	K-12
First Aid and Survival (068)	K-12
Going To and From School (908)	K-3
Human Growth and Development (907)	K-12
Illinois Test of Psycholinguistic Abilities (ITPA)(043)	K-6
Man and His Culture (913)	3-6
Management of Social Behavior (102)	K-6
Market Place (922)	2-10
Measurement (902)	3-8
Movigenics (006)	K-6
My Home and Family (110)	K-3
News Media in American Society (915)	4-12
Nutrition (057)	K-12
On The Road (119)	K-7
Our Community (108)	4-8
Safety Education (067)	K-9
Sensory Perception (059)	K-12
Solar System and Beyond (920)	3-7
Speaking and Listening (909)	K-6
Tobacco (061)	K-12
Transportation (923)	K-9
Trees to Toads – A Child's World (111)	K-3
World Health (070)	4-12
Mental Health	K-12

Research and Development Complex
State University College at Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222



COMPUTER BASED RESOURCE GUIDE
REQUEST FORM

OFFICE USE ONLY

DATE RECEIVED: ____________________

DATE ENTERED: ____________________

DATE MAILED: ____________________

GUIDE ID:

SCHOOL NAME: ____________________

ADDRESS: ____________________
(street)

____
(city) (state) (zip)

COUNTY: ____________________

SCHOOL DISTRICT: ____________________

UNIT TITLE (U) ____________________ UNIT NUMBER ____________

PART A

TEACHER NAME (T1) ____________________

GROUP OBJECTIVES ____ ____ ____ ____ ____ (Select 5 only)

CLASS M.A. RANGE (Please circle all those numbers which would indicate the mental age range of your class)

194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216
217 218

PART B

STUDENT NAME	INDIV. OBJ. 2 ONLY	INTERESTS	DEVELOPMENTAL TASKS	SEX	READING LEVEL	AGE		PHYS. HAND.	LEARNING ENVRMT.
						MA	CA		

RF:rev. 8/72

Plate 19.2 COMPUTER BASED RESOURCE GUIDE
REQUEST FORM

Plate 19.3

PAGE FROM C.A.P. ABSTRACTS, COMPUTER BASED RESOURCE UNITS

Alcohol (062) examines the effects of methyl and ethyl alcohol on the body and on behavior, and the correlation between alcohol and disease. The unit explores the relationship between the alcohol user, his family and the community as well as the effect of alcohol use on the economy. (G.L.K–12).

American Civilization in Historical Perspective (024) explores the social, political and educational forces which have molded American society in the last century. The evolutionary role of the educational system, social control, science, technology, mass communication and the plight of minority groups are investigated. (M.A. 14–18).

American People (026) examines the people comprising American society. The history of immigration from the pre-Columbian period is explored along with its associated problems of alienation, acculturation and assimilation. Family units and the roles of individuals are viewed, and there is also information about civil and women's rights and population trends. (M.A. 15–18).

American Cultural Revolution (005) is a study of forces which have contributed to contemporary culture and includes such topics as: the impact of youth, automation, alienation, social reform, censorship and religion. Activities stress pupil investigation of contemporary problems. Many of the materials are avant garde publications. (M.A. 15–18).

Career Education (003) provides the understanding and techniques necessary to gain employment. Various types of jobs and expectations related to them are studied as well as the process of seeking a job – application and interview; evaluation of one's own qualifications. The unit also discusses relationships between employees and employers and the meaning of money and financial benefits. (M.A. 4–14).

Communication (017) is concerned with techniques essential for making oneself understood and for understanding others. The unit traces the history and development of communication from pre-historic times, defines the nature and characteristics of communication and deals with specific means of communication by defining ways by which we exchange thoughts and ideas. Communication in contemporary society is explored by analyzing the effect of technological advances on our everyday lives. (M.A. 5–12).

Note: The abbreviation G. L. stands for Grade Level, and the abbreviation M. A. stands for Mental Age Range.

Plate 19.4

OBJECTIVES

ENVIRONMENTAL AND PUBLIC HEALTH FOR UNIT (065) (GRADES K – 12)

I. Objectives suggested for elementary school students (K–6)

1. To define the basic concepts relating to the environment.
2. To analyze how the senses contribute to our awareness of environmental conditions.
3. To identify the elements within the natural environment that have the potential for being harmful.
4. To identify the potentially hazardous elements in our environment that are consequences of human influence.
5. To describe how man can protect against the various harmful effects of the environment.
6. To illustrate the physical limitations of our natural resources.
7. To define the need for being able to work with others to maintain a healthful environment.
8. To cite examples of actions that demonstrate the responsibility of the individual for preserving and enhancing the quality of his environment.
9. To analyze the role of the people in the family, school, community, and nation that cooperate to protect the environment.
10. To analyze the role of private and public agencies in promoting higher levels of health.
11. To demonstrate an understanding of the concept of ecological balance.
12. To analyze the relationship between man and his environment.
13. To explain how man has the ability to destroy or preserve the earth's beauty and benefits through thoughtless exploitation or effective planning and constructive action.
14. To describe how the contamination of the environment through abuse is a genuine threat to man's health and future existence.
15. To explain the effects of man's increasing consumption of an environment of finite natural resources.
16. To identify the potentially dangerous chemical and physical elements in our environment.
17. To identify the disease-causing organisms and pests which are dangerous to man.
18. To identify the health agencies, health services, and programs intended to maintain and improve the environment.
19. To contribute to the enhancement of a healthful environment through positive actions.

20. To participate in responsible social action related to a healthful environment.

Objectives – ENVIRONMENTAL AND PUBLIC HEALTH

II. Objectives suggested for secondary school students (7-12)

21. To delineate the nature of public health practice.
22. To trace the influence of history in establishing foundations for the extensive public health practices which exist today.
23. To analyze the kinds of public health problems which exist today and why they have become major problems.
24. To explain the changes which have occurred in the nature of health problems and the need to deal effectively with them on a group basis.
25. To differentiate between health problems which are more personal in nature and others which are the concern of the whole community.
26. To become involved in ways of making the future a more healthful time to live.
27. To explain the attitudes and actions of governments relative to our major environmental and public health programs.
28. To analyze the essential principles of epidemiology and ecology which are relevant to public health affairs.
29. To describe the complexities involved in the improvement of the environment and in the control of sanitation practices.
30. To analyze the complex health problems related to community health practices.
31. To explore possible solutions to present and future environmental and public health problems.
32. To become involved in improving the environment.
33. To develop an appreciation of the necessity for each individual to conserve and utilize our resources (including human) most effectively.
34. To analyze the methods used in public health research.
35. To analyze the complexities that exist in the concept of biosphere.

Plate 19.5.

INSTRUCTIONAL VARIABLES SHEET

Instructions:

Write the CODE NUMBERS of the variables which apply to each student on the Request Form.

General Interests (2-5)

1	Philosophy	2	Psychology
3	Logic	4	Morals
5	Religion	6	Political Science
7	Economics	8	Law
9	Education	10	Commerce
11	Everyday Experience	12	Folklore
13	Language	14	Astronomy
15	Chemistry	16	Earth Science
17	Mathematics	18	Physics
19	Anthropology	20	Biological Science
21	Engineering	22	Agriculture
23	Domestic Science	24	Other Places
25	Animals	26	Famous People
27	Natural Phenomenon	28	Creating and Construction
29	Fine Arts	30	Photography
31	Biography or Autobiography	32	Drama
33	Fiction	34	Poetry
35	Geography	36	History
37	Sports/Leisure	38	Social Science
39	Physical Science	40	Natural Science
41	Humanities	42	Music
43	Art	44	Creative Writing
45	Adventure	46	Non-Fiction
47	Early Days	48	Modern Wonders
49	Old Tales	50	Fun
51	Automobiles	52	Transportation

Occupational Interests (Optional)

53	Industry	54	
55	Transportation	56	Homemaking/Home Nursing/Child Care
57	Food/Agriculture	58	Finance
59	Business/Office	60	Sales/Marketing
61	Recreation/Travel	62	Service

63	Construction	64	Arts & Entertainment
65	Science/Research	66	

Sex

72	Male	73	Female

Reading Level (Relative to Grade Level)

103	Non-Reader	104	Pre-Primer
105	Primer	106	1.0
107	1.5	108	2.0
109	2.5	110	3.0
111	4.0	112	5.0
113	6.0	114	7.0
115	8.0	116	9.0
117	10.0	118	11.0
119	12.0	120	Above 12

Mental Age

194	0-5	195	1-0
196	1-5	197	2-0
198	2-5	199	3-0
200	3-5	201	4-0
202	5-0	203	6-0
204	7-0	205	8-0
206	9-0	207	10-0
208	11-0	209	12-0
210	13-0	211	14-0
212	15-0	213	16-0
214	17-0	215	18-0
216	19-0	217	20-0
218	Above 20-0		

Chronological Age

219	0.5	220	1.0
221	1.5	222	2.0
223	2.5	224	3.0
225	4.0	226	5.0
227	6.0	228	7.0
229	8.0	230	9.0
231	10.0	232	11.0

233 12.0
234 13.0
235 14.0
236 15.0
237 16.0
238 17.0
239 18.0
240 19.0
241 20.0
242 21.0

Physical Handicaps

243 Blind
244 Partially Sighted
245 Deaf
246 Hard of Hearing
247 Gross Motor Disability
248 Fine Motor Disability

Residential Status

252 Residential
253 Non-Residential

Body Area

254 Head, Neck, Shoulders
255 Arms
256 Trunk, Lungs
257 Legs, Feet

Learning Environment

258 Classroom
259 Outdoors
260 Gymnasium

Plate 19.6

INSTRUCTIONAL VARIABLES
ENVIRONMENTAL AND PUBLIC HEALTH

General Interests (Select 3-5)

1. Philosophy
2. Psychology
3. Logic
4. Morals
6. Political Science
7. Economics
8. Law
9. Education
10. Commerce
11. Everyday Experiences
13. Language
15. Chemistry
16. Earth Science
17. Mathematics
18. Physics
20. Biological Science
21. Engineering
22. Agriculture
23. Domestic Science
24. Other Places
25. Animals
27. Natural Phenomenon
28. Creating and Construction
35. Geography
36. History
37. Sports/Leisure
38. Social Science
39. Physical Science
40. Natural Science
43. Art
44. Creative Writing
47. Early Days
48. Modern Wonders
51. Automobiles
52. Transportation

Sex Not Applicable

Developmental Tasks for Middle Childhood*

75. Building wholesome attitudes toward oneself as a growing organism
76. Learning to get along with age-mates
78. Developing fundamental skills in reading, writing, and calculating
79. Developing concepts necessary for everyday living
80. Developing conscience, morality, and a system of values
81. Achieving personal independence
82. Developing attitudes toward social groups and institutions

Developmental Tasks for Adolescents*

83. Achieving new and more relations with age-mates of both sexes
85. Achieving emotional independence from parents and other adults
87. Selecting and preparing for an occupation
88. Developing intellectual skills and concepts necessary for civic competence

*Select as many as appropriate

Developmental Tasks for Adolescents – Continued*

89. Desiring and achieving socially responsible behavior
90. Preparing for marriage and family life
91. Acquiring a set of values and ethical system as a guide to behavior

Reading Level
(Relative to grade level, not age level) (Select 1)

103. Non-Reader
104. Pre-Primer
105. Primer
106. 1.0
107. 1.5
108. 2
109. 2.5
110. 3
111. 4
112. 5
113. 6
114. 7
115. 8
116. 9
117. 10
118. 11
119. 12

Mental Age (Select 1)

202. 5-0
203. 6-0
204. 7-0
205. 8-0
206. 9-0
207. 10-0
208. 11-0
209. 12-0
210. 13-0
211. 14-0
212. 15-0
213. 16-0
214. 17-0
215. 18-0
216. 19-0

Chronological Age (Select 1)

226. 5-0
227. 6-0
228. 7-0
229. 8-0
230. 9-0
231. 10-0
232. 11-0
233. 12-0
234. 13-0
235. 14-0
236. 15-0
237. 16-0
238. 17-0
239. 18-0
240. 19-0

Physical Handicaps*

244. Partially Sighted
245. Deaf
246. Hard of Hearing
247. Gross Motor Disability
248. Fine Motor Disability

Learning Environment

258. Classroom
259. Outdoors

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*Select as many as appropriate

Plate 19.7

INSTRUCTIONAL VARIABLES
SPEAKING AND LISTENING

General Interests (select 3-5)

11. Everyday Experiences
13. Language
29. Fine Arts
32. Drama
33. Fiction
34. Poetry
42. Music
43. Art
46. Non-Fiction

Sex Not Applicable

Developmental Tasks for Middle Childhood*

74. Learning physical skills necessary for ordinary games
75. Building wholesome attitudes toward oneself as a growing organism
76. Learning to get along with age-mates
77. Learning an appropriate masculine or feminine social role
78. Developing fundamental skills in reading, writing and calculating
79. Developing concepts necessary for everyday living
80. Developing conscience, morality, and a system of values
81. Achieving personal independence
82. Developing attitudes toward social groups and institutions

Developmental Tasks for Adolescents*

83. Accepting new and more mature relations with age-mates of both sexes
84. Accepting one's physique (male or female role)
85. Achieving emotional independence from parents and other adults
86. Achieving assurances of economic independence
87. Selecting and preparing for an occupation
88. Developing intellectual skills and concepts necessary for civic competence

*Select as many as appropriate

Developmental Tasks for Adolescents – Continued*

89. Desiring and achieving socially responsible behavior
90. Preparing for marriage and family life
91. Acquiring a set of values and ethical system as a guide to behavior.

Reading Level (Relative to grade level – Select 1)

103. Non-Reader
104. Pre-Primer
105. Primer
106. 1
107. 1.5
108. 2
109. 2.5
110. 3
111. 4
112. 5
113. 6

Mental Age (Select 1)

201. 4-0
202. 5-0
203. 6-0
204. 7-0
205. 8-0
206. 9-0
207. 10-0
208. 11-0
209. 12-0
210. 13-0

Chronological Age (Select 1)

226. 5-0
227. 6-0
228. 7-0
229. 8-0
230. 9-0
231. 10-0
232. 11-0
233. 12-0
234. 13-0
235. 14-0

Physical Handicaps*

243. Blind
244. Partically Sighted
246. Hard of Hearing
247. Gross Motor Disability
248. Fine

Learning Environment

258. Classroom
259. Outdoors
260. Gymnasium

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*Select as many as appropriate

Plate 19.8

INSTRUCTIONAL VARIABLES
SAFETY EDUCATION

General Interest (Select 3-5)

1. Philosophy
2. Psychology
3. Logic
4. Morals
7. Economics
8. Law
9. Education
10. Commerce
11. Everyday Experiences
13. Languages
15. Chemistry
16. Earth Science
17. Mathematics
18. Physics
20. Biological Science
21. Engineering
22. Agriculture
23. Domestic Science
28. Creating and Construction
30. Photography
32. Drama
35. Geography
37. Sports/Leisure
38. Social Science
43. Art
51. Automobiles
52. Transportation

Sex Not applicable

Developmental Tasks for Middle Childhood*

75. Building wholesome attitudes toward oneself as a growing organism
76. Learning to get along with age-mates
78. Developing fundamental skills in reading, writing, and calculating
79. Developing concepts necessary for everyday living
80. Developing conscience, morality, and a system of values
81. Achieving personal independence
82. Developing attitudes toward social groups and institutions

Developmental Tasks for Adolescents*

85. Achieving emotional independence from parents and other adults.
87. Selecting and preparing for an occupation
88. Developing intellectual skills and concepts necessary for civic competence
89. Desiring and achieving socially responsible behavior
90. Preparing for marriage and family life
91. Acquiring a set of values and ethical system as a guide to behavior

*Select as many as appropriate

Reading Level (Relative to grade level not age level) (Select 1)

105. Primer
106. 1
107. 1.5
108. 2
109. 2.5
110. 3
111. 4
112. 5
113. 6
114. 7
115. 8
116. 9
117. 10
118. 11
119. 12
120. Above 12

Mental Age (Select 1)

202. 5-0
203. 6-0
204. 7-0
205. 8-0
206. 9-0
207. 10-0
208. 11-0
209. 12-0
210. 13-0
211. 14-0
212. 15-0
213. 16-0

Chronological Age (Select 1)

225. 4-0
226. 5-0
227. 6-0
228. 7-0
229. 8-0
230. 9-0
231. 10-0
232. 11-0
233. 12-0
234. 13-0
235. 14-0
236. 15-0
237. 16-0

Physical Handicaps*

244. Partially Sighted
245. Deaf
246. Hard of Hearing

Learning Environment

Not applicable

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*Select as many as appropriate

Plate 19.9

INSTRUCTIONAL VARIABLES
TOBACCO

General Interests (Select 3-5)

2. Psychology
3. Logic
4. Morals
6. Political Science
7. Economics
8. Law
9. Education
10. Commerce
11. Everyday Experiences
13. Language
15. Chemistry
17. Mathematics
20. Biological Science
22. Agriculture
23. Domestic Science
28. Creating/Construction
32. Drama
34. Poetry
35. Geography
36. History
37. Sports/Leisure
38. Social Science
44. Creative Writing

Sex Not Applicable

Developmental Tasks for Middle Childhood*

75. Building wholesome attitudes toward oneself as a growing organism
76. Learning to get along with age-mates
78. Developing fundamental skills in reading, writing and calculating
79. Developing concepts necessary for everyday living
80. Developing conscience, morality and a system of values
81. Achieving personal independence
82. Developing attitudes toward social groups and institutions

Developmental Tasks for Adolescents*

85. Achieving emotional independence from parents and other adults
88. Developing intellectual skills and concepts necessary for civic competence
89. Desiring and achieving socially responsible behavior
91. Acquiring a set of values and ethical system as a guide to behavior

*Select as many as appropriate

Reading Level (Relative to grade level – Select 1)

111. 4.0
112. 5.0
113. 6.0
114. 7.0
115. 8.0
116. 9.0
117. 10.0
118. 11.0
119. 12.0

Mental Age (Select 1)

206. 9-0
207. 10-0
208. 11-0
209. 12-0
210. 13-0
211. 14-0
212. 15-0
213. 16-0
214. 17-0
215. 18-0

Chronological Age (Select 1)

229. 8-0
230. 9-0
231. 10-0
232. 11-0
233. 12-0
234. 13-0
235. 14-0
236. 15-0
237. 16-0
238. 17-0
239. 18-0

Physical Handicaps*

244. Partially Sighted
245. Deaf
246. Hard of Hearing
248. Fine Motor Disability

Learning Environment

Not Applicable

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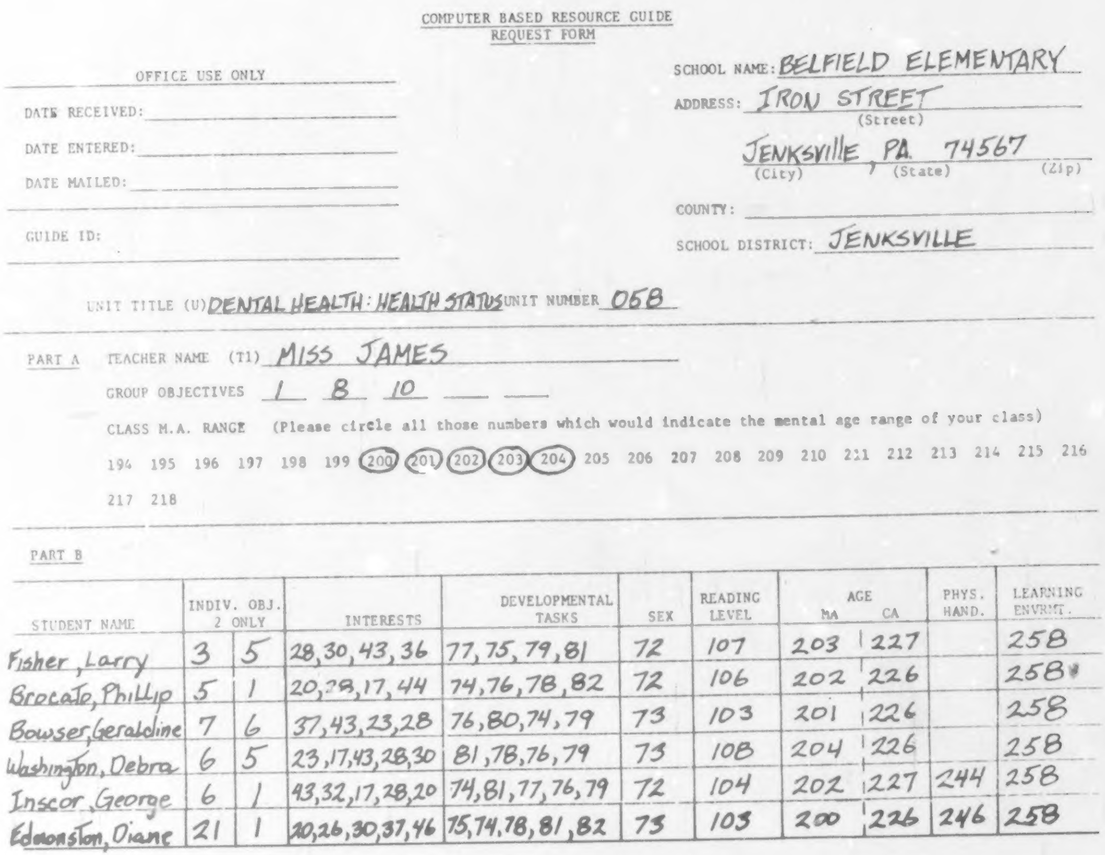
*Select as many as appropriate



COMPUTER BASED RESOURCE GUIDE
REQUEST FORM

OFFICE USE ONLY

DATE RECEIVED:

DATE ENTERED:

DATE MAILED:

GUIDE ID:

SCHOOL NAME: BELFIELD ELEMENTARY

ADDRESS: IRON STREET (Street)

JENKSVILLE (City), PA (State) 74567 (Zip)

COUNTY:

SCHOOL DISTRICT: JENKSVILLE

UNIT TITLE (U) DENTAL HEALTH: HEALTH STATUS UNIT NUMBER 058

PART A TEACHER NAME (T1) MISS JAMES

GROUP OBJECTIVES 1 8 10

CLASS M.A. RANGE (Please circle all those numbers which would indicate the mental age range of your class)

194 195 196 197 198 199 [✓ 200] [✓ 201] [✓ 202] [✓ 203] [✓ 204] 205 206 207 208 209 210 211 212 213 214 215 216 217 218

PART B

STUDENT NAME	INDIV. OBJ. 2 ONLY		INTERESTS	DEVELOPMENTAL TASKS	SEX	READING LEVEL	AGE		PHYS. HAND.	LEARNING ENVRMT.
							MA	CA		
Fisher, Larry	3	5	28,30,43,36	77,75,79,81	72	107	203	227		258
Brocato, Phillip	5	1	20,28,17,44	74,76,78,82	72	106	202	226		258
Bowser, Geraldine	7	6	37,43,23,28	76,80,74,79	73	103	201	226		258
Washington, Debra	6	5	23,17,43,28,30	81,78,76,79	73	108	204	226		258
Inscor, George	6	1	43,32,17,28,20	74,81,77,76,79	72	104	202	227	244	258
Edmonston, Diane	21	1	20,26,30,37,46	75,74,78,81,82	73	103	200	226	246	258

Plate 19.10 COMPUTER BASED RESOURCE GUIDE REQUEST FORM

Plate 19.11

INSTRUCTIONS FOR OBTAINING A COMPUTER-BASED RESOURCE GUIDE

Materials Enclosed: This request packet should contain the following materials: 1) Computer-Based Resource Guide request form(s), 2) A listing of objectives related to the unit topic(s), 3) An instructional variables listing attached to each objectives list.

Directions:

1. Fill in the complete mailing address and unit title on the Computer-Based Resource Guide Request Form.
2. Indicate the teacher's name, the mental age range of the class (see category on M.A.), and the names of the students.
3. GROUP REQUEST – PART A. Read carefully any guidelines or instructions which may be noted on the "objectives" list. Select up to five (5) objectives which are appropriate for use with the total class and indicate the number of each "Group" objective selected on the appropriate lines in Part A of the Request form.
4. INDIVIDUAL REQUEST – PART B. For each student select one or two appropriate objectives from the objectives list and indicate the number(s) in the designated column. The student objectives may be the same as those selected in Part A or they may be entirely different. (Pupil-teacher planning, where appropriate, is encouraged in selecting these objectives.)
5. STUDENT VARIABLES SELECTION. Indicate – for each student – in the appropriate columns, the number(s) corresponding to the variables selected from the instructional variables listing. Note that when selecting student variables for Part B, you are instructed in some cases (Sex, Reading Level, Mental Age. Chronological Age) to select only one item in each category, while in other cases (General Interests, Developmental Tasks, Physical Handicaps) you may select up to five or as many as are appropriate. *Remember*, all variable categories are optional!
6. Send the Computer-Based Resource Guide request form to the address indicated below:

CBRU
Research and Development Complex
State University College – Buffalo
1300 Elmwood Avenue
Buffalo, New York 14222

7. When you receive your Resource Guide you will also receive an evaluation form attached to the print-out. Please take time to fill out this evaluation form once you have completed the use of your Resource Guide.

Plate 19.12

** THIS IS A COMPUTER-BASED RESOURCE GUIDE **

A Resource Guide is a selective segment of a Resource Unit.

A Resource Unit, by definition, is a planning aid which provides the teacher with a compilation of suggested instructional materials and strategies which are related to a series of instructional objectives. The information and strategies contained herein are suggestive and not prescriptive.

They are suggestive to the extent that educators who develop the unit have attempted to relate certain activities, materials and measuring devices to objectives, and a series of student variables. At best this is only a preliminary process. In the final analysis it is you – the classroom teacher who must make the final decision with student cooperation whenever possible whether certain activities and certain materials are appropriate for each child.

Your Resource Guide is divided into three parts –

Part A –

The teacher portion which contains the objectives you have selected for total group work. Under each objective are listed related-content group activities, materials and measuring devices.

Part B –

The student portion which contains each student's name, the two objectives he has selected, and suggested activities and materials related to each objective which are retrieved on the basis of the varibles you indicated on the request form.

Part C –

A total listing of all materials suggested in this guide.

Please be sure to complete and return the evaluation form attached to this guide. Future expansion and improvement of each unit depends upon your suggestions and reactions.

UNIT TITLE – DENTAL HEALTH:HEALTH STATUS

Requestor Name – Miss James

Obj. 1

1. To practice daily activities known to contribute to better health.

Content Outline

1. The teeth perform many functions, e.g.
   - chew food
   - speak clearly
   - look attractive
   - have proper facial form.
3. A balanced diet helps to build healthy teeth.
9. Chewing raw fruits and vegetables, such as apples, celery, and carrots, help to clean the teeth Other foods which help to clean the teeth include lettuce, cucumbers, cabbage, and radishes.
15. A toothbrush should be rinsed clean after use and placed in a holder to dry.
17. Replace the toothbrush when the bristles become frayed, soft, or loose.
18. When teeth cannot be brushed after eating, you should thoroughly rinse your mouth with water
25. Reduction of dental caries can best be achieved by regular professional dental care
   - brushing the teeth correctly after eating
   - regular professional dental care on a recall basis
   - topical fluoride application and/or fluoridation of water supplies.
29. All dental decay cannot be prevented, hence there is a need for regular and frequent visits to the dentist. Benefits from these visits include
   - the early detection and correction of tooth defects and dental disease identification and correction of irregularities in the growth of teeth
   - reduction in the cost of care
   - prevention of absence from school for treatment of neglected mouths
   - maintaining a good appearance and disposition by preventing infection and pain
36. Pupils should take extra good care of the 6-year molars because they help to determine the shape of the jaws, the face, and the position of the other teeth, and cannot be replaced.

42. Primary teeth should ordinarily be retained until lost naturally because they are needed
    - for chewing
    - for appearance
    - to preserve space for the permanent teeth
    - for normal growth and development of the jaws.

50. A tooth is a living structure requiring food. It reacts to various stimuli such as temperature and pressure.

58. Bacteria are present in our mouth all of the time. Some of these bacteria make acids from the food left between our teeth.

64. Generally, foods necessary for maintaining oral health are the same as those needed for general physical health.

67. The use of fresh fruits and vegetables, milk and juices for between meal snacks is better for your teeth and general health than sweet snacks.

70. A lack of vitamin C may cause bleeding in the gums.

8. Dental plaques are a gluey gelatin-like substance that adheres to the teeth and afford for the bacteria

89. The initial action that causes damage to a tooth occurs under a dental plaque.

99. Periodontitis usually follows chronic gingivitis. As the inflammation spreads the gum withdraws from the tooth, forming a pocket which fills with bacteria and pus .This weakens the support of the tooth and may cause its loss.

100. Periodontal diseases can best be prevented by
    - proper dental hygiene including the massaging of gums
    - a well-balanced diet
    - regular visits to the dentist

101. The loss of teeth in adults is most often caused by periodontal disease.

119. The dentifrice used for oral hygiene serves three purposes
    - assists in cleansing the teeth
    - aids as a caries prevention agent
    - helps prevent and control mouth odors.

123. Dental tape, or dental floss, can be used to remove food particles wedged between the teeth beyond the reach of the toothbrush.

124. Dental tape may be obtained in several thicknesses, the need depending on the space between the teeth.

125. Dental tape or floss should be used with great care and only on advice of the dentist because of possible harm to the soft tissue around the teeth

130. Mechanical irrigation devices are useful in removing food particles between the teeth

133. Causes of halitosis are
    - infected teeth or gums
    - periodontal disease
    - stomach disorders
    - certain types of food, such as raw onions, cause temporary halitosis

- infections, in the nose, throat and lungs
- lung cancer
- smoking
- diabetes
- lack of proper oral hygiene

138. Chewing food is important. Decayed teeth and sore gums may not permit one to chew efficiently.

139. Infection from diseased teeth can be carried through the blood stream to other parts of the body and set up another focus of infection.

149. Topical application of fluorides makes the enamel of the tooth more resistant to mouth acids.

156. Fluoride solutions make the teeth more resistant to dental caries.

199. Proper sleep and rest are among the most important needs of childhood. Sleep, rest and relaxation give the body time to grow and rebuild.

200. There is a need for the child to alternate activity with rest, relaxation, and sleep.

201. A child should be able to assume some responsibility for his own rest and sleep time.

211. The individual has a definite responsibility for his personal health, and factual knowledge is essential in making decisions.

227. The teeth contribute to speech, proper mastication and appearance.

303. The problems associated with improving the dental health status are complex and difficult to change because prevention and correction of dental disease depends upon the motivation of individuals.

398. Many factors contribute to the dental decay process. Among these are:
- dental plaque
- mouth bacteria
- the role of acids
- the role of saliva
- the role of food
- irregular alignment
- gum disorders
- poor habits
- emotional tensions, such as brixism (grinding of teeth, especially at night while sleeping.)

406. Proper toothbrushing, rinsing, and using dental floss will remove food that clings to irregular surfaces.

Small Group Activities

4. Collect pictures of famous people smiling. Discuss the importance of teeth for a pleasing experience.

5. Prepare a bulletin board display or a scrap book of foods which build strong teeth.
6. Collect pictures of snack foods, such as fresh fruits and vegetables, nuts, milk, and juices, that make delicious substitutes for sweet snacks that are high in refined carbohydrates. Use them for a bulletin board display or a class scrapbook.
7. Develop a card game similar to old maid utilizing dental health terms to be matched with picture representations. The old maid can be represented by Mr. Tooth Decay.
8. Cut out pictures of fresh fruit and vegetables and discuss why they might be called nature's toothbrush. Encourage children to bring these foods to be eaten at the end of their lunches.
11. Compare the relationship between washing the hands with soap and water and brushing the teeth with an acceptable dentifrice.
12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
13. Invite a dental specialist to discuss proper methods of maintaining oral health.
14. Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration. Make a chart showing the correct method of brushing the teeth.
15. Discuss the importance of brushing immediately after eating.
16. Have a collection of various styles of toothbrushes for demonstration purposes, discuss the advantages and disadvantages of each in relation to size, style, and hardness of the bristle.
18. Discuss why rinsing your mouth with water after eating is a good health practice.
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
21. Discuss the effect of dental health habits on personal appearance and general health.
22. Make and name a toothbrush puppet and prepare a dental health message for him each week. Some of the messages could be on the substitution of good dental health habits for poor dental health habits.
24. Discuss the relationship between toothaches and dental caries using posters or models showing the tooth structure.
26. Discuss the process of dental decay.
38. Discuss the importance of taking good care of the primary teeth.
43. Discuss the meaning of the following words

Germ
Acid
Primary
Appearance
Digestion
Amino acid
Fluoride

Permanent
Dentist
Enamel
Calcium
Caries
Penetrates
Carbohydrate

These may also be used for spelling words. The teacher may wish to add other important terms.

48. Conduct a definition bee utilizing dental vocabulary.
52. Using questions compiled by the class, conduct a quiz program regarding treatment of periodontal diseases.
88. Discuss the importance of maintaining the permanent teeth and good oral health throughout life.
94. Demonstrate various methods of massaging the gums
    - with a toothbrush
    - with a rubber-tipped brush
    - with a clean index finger and thumb.
96. Have a dental specialist explain the purpose and techniques of using dental tape, dental floss or water pik noting that special care must be taken to avoid injury to the fragile gingival tissues between the teeth.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.
130. Ask the school dentist and/or dental hygienist to discuss the importance of proper dental care.
131. Keep a daily health practice record which includes areas such as nutrition, sleep, and safety.
170. Discuss tooth decay. Describe the factors involved in tooth decay.

Materials

1. Film. Maxwell, Boy Explorer. 7 min. sd. color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Three animated small boys found a lost civilization No-De-Kay and discover that the secret of it is proper toothbrushing. They demonstrate the proper and effective use of the toothbrush.
3. Film. Billy Meets Tommy Tooth. 1960. 4 min. sd. B/W. National Apple Institute. Headquaters Bldg. Suite 410, 2000 P St. NW, Washington, D.C. 20036. A little boy who has just lost his tooth puts it under his pillow before retiring. He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
5. Film. The Day that Suzie Lost Her Smile. 1959. 4 min. sd. color. Modern Talking Picture Service. 1212 Avenue of the Americas, New York, New York. 10036. A cartoon on dental hygiene in which the world of Suzie Smilebrite almost crumbled when her hero, Bill Blue-Eyes, said her smile had disappeared. Concludes with Suzie recapturing her smile and her man.
9. Film. Karius and Baktus. 1968. 16 min. sd. color. Modern Learning Aids. 16 Spear Street, San Francisco, California. 94105. Story of two trolls living in the mouth of a small boy illustrates the importance of regular toothbrushing.

12. Film. Teeth White-Teeth Bright. 1965. 10 min. sd. color. Sterling Educational Films. P. O. Box 8497, Universal City, Los Angeles, California. 91608. Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.

13. Film. Three R'S for Healthy Smiles. 15 min. sd. color. University of Southern California. Dept. of Cinema, University Park, Los Angeles, California. 90007. A puppet film exhorting the importance of good health habits in the care of teeth.

15. Film. Your Teeth. 1964. 6 min. sd. color. B/W. Encyclopedia Britannica Educational Corp. 425 No. Michigan Avenue, Chicago, Ill. 60611. Uses animation to show how the first teeth form and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.

23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Ill. 60611.

28. Film. A Dentist Visits the Classroom. 17 min. sd. color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Ill. 60611. Presents a classroom situation where the children do research and reading on dental health before the dentist is invited to come to the school. The dentist discusses the importance of caring for the teeth.

30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Ill. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.

32. Film. Tommy's Healthy Teeth. 11 min. sd. color. B/W. Coronet Films. 65 East South Water Street, Coronet Building, Chicago, Ill. 60601. A boy visits a dental office, has a cavity filled, and learns that regular dental check-ups are as important to having healthy teeth as brushing them properly and eating the right foods.

33. Film. Learning to Use Your Brush. 11 min. sd. B/W. McGraw-Hill Textfilms. 330 West 42nd Street, New York, New York. 10018. Shows the techniques of using a toothbrush.

34. Film. A Matter of Choice. 1960. 30 min. sd. color. B/W. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois 60611. Discusses deciduous and permanent teeth, cleaning and brushing, and dental disease.

38. Filmstrip. Brush Up On Your Teeth. Color/Captions. American Dental Association, 211 E. Chicago Ave., Chicago, Ill. 60611. Shows how to take care of the teeth. Includes proper food and emphasizes regular visits to the dentist.

41. Filmstrip. A Happy Day With Jane. Color/Captions. California Dairy Industry Prod., 3900 W. 3rd St., Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care.

42. Filmstrip Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York. 11435. From the good health and you series-illustrates desirable patterns for young people.
43. Filmstrip. Herbie's Dream. Color/Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California. 90025. Shows proper dental care. Eat the right foods, brush often and visit the dentist regularly.
45. Filmstrip Karius and Baktus. Color. Modern Learning Aids, 1212 6th Ave., New York, New York. 10036. Puppets illustrate the importance of orthodonic bands, emphasizing to his younger sister that cleaning teeth properly and practicing good dental health habits are essential or health and appearance.

Measuring Devices

2. Using a model, demonstrate the proper way to brush the teeth.
7. Make and name a puppet and prepare a dental health message for him each week. Message should be specific and accurate.
8. Use dental health words in word meaning contests.
17. Analyze a week's menu in terms of foods that are detrimental to good dental health.
18. Prepare posters and charts of foods which are rich in vitamins and minerals.
25. Demonstrate various methods of massaging the gums.
31. Identify the dental health terms in a prepared anagram.
39. Keep a growth chart and periodically interpret changes.
40. Construct a collage, poster and/or bulletin board related to health status.
48. Poster or collage may be done on one area of dental health and evaluated on accuracy and creativeness.
49. Bulletin board having to do with dental health and graded on originality, clarity, appropriateness, and completeness.

UNIT TITLE – DENTAL HEALTH:HEALTH STATUS

Requestor Name – Miss James

Obj. 8

8. To value periodic professional dental treatment.

Content Outline

17. Replace the toothbrush when the bristles become frayed, soft, or loose.
21. Thumb-sucking can cause serious malocclusion problems that adversely affect the appearance and general health of a child. These problems may require extensive orthodontia.
24. Dental caries, which are commonly called tooth decay, destroys the structure of the teeth.
25. Reduction of dental caries can best be achieved by regular professional dental care
    – brushing the teeth correctly after eating
    – regular professional dental care on a recall basis
    – topical fluoride application and/or fluoridation of water supplies.
26. The fluoridation of water supplies as a safe and effective method of reducing tooth decay has been approved by the following groups
    – American Dental Association
    – American Medical Association
    – American Association for the Advancement of Science
    – U.S. Public Health Service
    – National Research Council
    – Association of State and Territorial Health Offices
29. All dental decay cannot be prevented, hence there is a need for regular and frequent visits to the dentist. Benefits from these visits include
    – the early detection and correction of tooth defects and dental disease identification and correction of irregularities in the growth of teeth
    – reduction in the cost of care
    – prevention of absence from school for treatment of neglected mouths
    – maintaining a good appearance and disposition by preventing infection and pain.
30. The dentist is a medical specialist who helps to keep teeth healthy by
    – thoroughly examining the teeth and taking X-rays to find hidden cavities and other problems of the teeth and gums so that they can be treated early.

- cleaning your teeth
- filling cavities to prevent further decay

36. Pupils should take extra good care of the 6-year molars because they help to determine the shape of the jaws, the face, and the position of the other teeth, and cannot be replaced.

42. Primary teeth should ordinarily be retained until lost naturally because they are needed
   - for chewing
   - for appearance
   - to preserve space for the permanent teeth
   - for normal growth and development of the jaws

78. Malocclusion can often be prevented by proper professional dental care from infancy

84. Unless small cavities are treated, the decay will penetrate the dentin.

99. Periodontitis usually follows chronic gingivitis. As the inflammation spreads the gum withdraws from the tooth, forming a pocket which fills with bacteria and pus. This weakens the support of the tooth and may cause its loss.

100. Periodontal diseases can best be prevented by
   - proper dental hygiene including the massaging of gums
   - a well-balanced diet
   - regular visits to the dentist

101. The loss of teeth in adults is most often caused by periodontal disease.

103. The removal of tartar by a dentist is important in the prevention of gingivitis and periodontitis.

112. If a tooth is completely knocked out, immediate reimplantation may be possible. The following action should be taken
   - drop the tooth in a cold, weak salt and water solution
   - telephone family dentist or county dental society
   - follow the recommendations of the dentist.

113. Space maintainers can be used when primary teeth are lost early, thus lessening or even preventing more complicated treatment later.

114. A fixed bridge is supported by crowns and inlays on the abutment teeth which stablizes it. This prevents drifting or movement which may lead to serious malposition.

115. Missing permanent teeth may be replaced with partial dentures.

116. A fixed partial denture may be used when the space is between two teeth. A removable partial denture must be used when there is no tooth behind the space.

120. A dentifrice, in itself, will not prevent dental caries. However, the usefulness of stannous fluoride dentifrice as a caries preventive agent is recognized by the council on dental therapeutics of the American Dental Association.

125. Dental tape or floss should be used with great care and only on advice of the dentist because of possible harm to the soft tissue around the teeth.

130. Mechanical irrigation devices are useful in removing food particles between the teeth.
131. Mechanical irrigation devices should be used only on the recommendation of the dentist.
133. Causes of halitosis are
    - infected teeth or gums
    - periodontal disease
    - stomach disorders
    - certain types of food, such as raw onions, cause temporary halitosis
    - infections, in the nose, throat and lungs
    - lung cancer
    - smoking
    - diabetes
    - lack of proper oral hygiene
135. The work of the dentist falls into two groups
    Preventive – to avoid possible dental health problems
    Remedial – to correct existing dental health problems
136. Dental X-rays are especially valuable in preventive dentistry.
137. When there are teeth missing, a dentist may prescribe and fit artificial teeth and dentures.
139. Infection from diseased teeth can be carried through the blood stream to other parts of the body and set up another focus of infection.
141. Professional dental care can arrest the progress of infections that originate in the teeth, tongue, lips, jaws and associated structures.
144. An orthodontist is a dentist who has been specially trained to straighten teeth and to correct abnormalities in oral bone structure in order to
    - improve appearance
    - correct malocclusion
    - correct irregularities of teeth and biting relationships for more efficient chewing function
148. Fluoride treatment by any method usually results in a sixty to sixty-five percent reduction in caries by young children. Children who drink fluoridated water from birth mature with two-thirds less tooth decay and stronger, straighter teeth.
175. To maintain a high health status, students should make periodic visits to the dentist and doctor for preventive purposes.
179. There are many community health personnel who work with families to assist in building and maintaining health.
    - Doctor
    - Dentist
    - School Nurse
    - Dental Hygienist
    - Public Health Department
    - Red Cross
    - Pollution Control
    - Miscellaneous Health Agencies

217. It is important for the individual to appreciate and to understand the findings of the many people concerned with his health status.
221. Everyone should establish a life-long practice of having his total fitness evaluated at regular intervals. An annual health examination can help the doctor
   - find minor problems which can be healed before they become big problems
   - check height and weight to see about gain or loss
   - to explain how the student is growing in terms of age and body type
   - see if the student needs to go to the dentist to have his teeth fixed
   - interpret the screening tests (vision, hearing, dental) and advise if there is need for further action
   - answer any questions that may be causing concern.
222. According to the New York State Education law, medical inspection shall be provided for all pupils attending the public schools in this state. Students who are not able to produce evidence of a health examination by their own physician periodically are examined by the school physician.
224. There are many tests available to help one detect various defects and understand one's health status better.
227. The teeth contribute to speech, proper mastication and appearance.
228. The dentist and dental hygienist provide preventive and corrective services to promote dental health.
305. Most dental health problems may be prevented with present knowledge of prevention and control of dental illnesses.
306. Dental health education must provide an understanding of the factors involved in maintaining oral helath and it must stimulate the desire to practice what is known.
307. Good dental health practices require persistent daily attention, however, indifference and complacency toward dental health practices are difficult to overcome because people are often unwilling to take the time for proper dental care.

Small Group Activities

3. Try to pronounce the D, S, or TH sounds without using the teeth.
4. Collect pictures of famous people smiling. Discuss the importance of teeth for a pleasing experience.
7. Develop a card game similar to old maid utilizing dental health terms to be matched with picture representations. The old maid can be represented by Mr. Tooth Decay.
12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.

13. Invite a dental specialist to discuss proper methods of maintaining oral health.
19. Discuss how your teeth can
    – crack like cement
    – chip like smooth china
    – become crooked like a tree
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
21. Discuss the effect of dental health habits on personal appearance and general health.
22. Make and name a toothbrush puppet and prepare a dental health message for him each week. Some of the messages could be on the substitution of good dental health habits for poor dental health habits.
24. Discuss the relationship between toothaches and dental caries using posters or models showing the tooth structure.
26. Discuss the process of dental decay.
32. Discuss the first visit to the dentist.
33. Discuss the importance of professional cleaning of the teeth.
38. Discuss the importance of taking good care of the primary teeth.
41. Discuss why a dentist will often put in a space maintainer if a primary molar is extracted prematurely.
43. Discuss the meaning of the following words
    Germ
    Acid
    Primary
    Appearance
    Digestion
    Amino acid
    Fluoride
    Permanent
    Dentist
    Enamel
    Calcium
    Caries
    Penetrates
    Carbohydrate

    These may also be used for spelling words. The teacher may wish to add other important terms.
48. Conduct a definition bee utilizing dental vocabulary.
52. Using questions compiled by the class, conduct a quiz program regarding the development, function, anatomy, and care of teeth.
73. Discuss the effects of poor bite on chewing food, speech patterns, and appearance.
75. Conduct a simple dramatic test that can be used to detect dental plaque deposits, i.e. apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth.
76. Review the structure of a tooth, then discuss the process of decay from the enamel and the dentin to the pulp.
77. Discuss the importance of early detection and treatment of caries.
78. Discuss the proper relationship of each tooth to the teeth on each side of it and to the teeth it bites against when the jaws close.

81. Invite a dentist to school or send groups to a dentist to examine X-rays showing
    - decay
    - small hidden cavities
    - fillings
    - abscesses
    - bony destruction in pyorrhea cases
    - impacted teeth
    - malformed roots.
82. Examine tooth decay bacteria under a microscope.
85. Obtain from a local dentist a series of slides or make posters and bulletin board displays, showing stages of periodontal disease.
86. Invite a dental health specialist to discuss the cause, effect, and treatment of periodontal diseases.
88. Discuss the importance of maintaining the permanent teeth and good oral health throughout life.
92. Discuss the problems caused by missing teeth and the necessity of professional dental care to prevent or control these problems.
99. Discuss and list on the blackboard good and poor dental health habits.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.
104. Prepare a television commercial or short play recommending periodic professional dental examination.
105. Use role-playing to show how to make an appointment with the dentist.
107. Invite a dentist to show the use of various instruments and answer questions pertaining to fillings, cleaning, X-rays, fluoride application, etc.
129. Role-play the ways in which the following health team members may help us
    - Teacher
    - Family Doctor
    - Public Health Nurse
    - Dentist
    - Social Worker
    - Custodian.
130. Ask the school dentist and/or dental hygienist to discuss the importance of proper dental care.
151. Discuss what to do when hurt.
161. Discuss the reasons for visits to the
    - Physician
    - Dental Hygienist
    - Dentist
    - School Psychologist.
162. Name and describe the function of various health personnel. Discuss the similarities and the differences in their functions.

170. Discuss tooth decay. Describe the factors involved in tooth decay.
270. Have a school campaign for good dental health using posters, songs, jingles, riddles, plays. How to avoid accidents to the teeth.

Large Group Activities

3. Try to pronounce the D, S, or TH sounds without using the teeth.
4. Collect pictures of famous people smiling. Discuss the importance of teeth for a pleasing experience.
7. Develop a card game similar to old maid utilizing dental health terms to be matched with picture representations. The old maid can be represented by Mr. Tooth Decay.
12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
13. Invite a dental specialist to discuss proper methods of maintaining oral health.
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
21. Discuss the effect of dental health habits on personal appearance and general health.
22. Make and name a toothbrush puppet and prepare a dental health message for him each week. Some of the messages could be on the substitution of good dental health habits for poor dental health habits.
24. Discuss the relationship between toothaches and dental caries using posters or models showing the tooth structure.
26. Discuss the process of dental decay.
27. Present a summary of this unit as a skit for an assembly program.
32. Discuss the first visit to the dentist.
33. Discuss the importance of professional cleaning of the teeth.
38. Discuss the importance of taking good care of the primary teeth.
41. Discuss why a dentist will often put in a space maintainer if a primary molar is extracted prematurely.
43. Discuss the meaning of the following words

Germ
Acid
Primary
Appearance
Digestion
Amino acid
Fluoride

Permanent
Dentist
Enamel
Calcium
Caries
Penetrates
Carbohydrate

These may also be used for spelling words. The teacher may wish to add other important terms.

48. Conduct a definition bee utilizing dental vocabulary.

52. Using questions compiled by the class, conduct a quiz program regarding the development, function, anatomy, and care of teeth.
73. Discuss the effects of poor bite on chewing food, speech patterns, and appearance.
75. Conduct a simple dramatic test that can be used to detect dental plaque deposits. i.e. apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth.
76. Review the structure of a tooth, then discuss the process of decay from the enamel and the dentin to the pulp.
77. Discuss the importance of early detection and treatment of caries.
78. Discuss the proper relationship of each tooth to the teeth on each side of it and to the teeth it bites against when the jaws close.
81. Invite a dentist to school or send groups to a dentist to examine X-rays showing
    - Decay
    - Small hidden cavities
    - Fillings
    - Abscesses
    - Bony destruction in pyorrhea cases
    - Impacted teeth
    - Malformed roots.
85. Obtain from a local dentist a series of slides or make posters and bulletin board displays, showing stages of periodontal disease.
86. Invite a dental health specialist to discuss the cause, effect, and treatment of periodontal diseases.
88. Discuss the importance of maintaining the permanent teeth and good oral health throughout life.
92. Discuss the problems caused by missing teeth and the necessity of professional dental care to prevent or control these problems.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.
105. Use role-playing to show how to make an appointment with the dentist.
107. Invite a dentist to show the use of various instruments and answer questions pertaining to fillings, cleaning, X-rays, fluoride application, etc.
129. Role-play the ways in which the following health team members may help us
    - Teacher
    - Family Doctor
    - Public Health Nurse
    - Dentist
    - Social Worker
    - Custodian.
130. Ask the school dentist and/or dental hygienist to discuss the importance of proper dental care.

161. Discuss the reasons for visits to the
    - Physician
    - Dental Hygienist
    - Dentist
    - School Psychologist.
162. Name and describe the function of various health personnel. Discuss the similarities and the differences in their functions.
170. Discuss tooth decay. Describe the factors involved in tooth decay.

Materials

2. Film. A Dentist in the Classroom. 1964. 5 min. sd. Color. A.S.S.N. Films. 347 Madison Avenue, New York, New York. 10017. Depicts the visit of a dentist to a fourth grade classroom where he answers the student's questions concerning dental care.
3. Film. Billy Meets Tommy Tooth. 1960. 4 min. sd. B/W. National Apple Institute. Headquaters Bldg. Suite 410, 2000 P St. NW, Washington, D. C. 20036. A little boy who has just lost his tooth puts it under his pillow before retiring. He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
4. Film. The Beaver's Tale. 1964. 5 min. sd. Color. A.S.S.N. Films. 347 Madison Avenue, New York, New York. 10017. Uses stylized puppet characters to prepare young children for their first trip to the dentist.
8. Film. Judy's Smile. 8 min. sd. Color. Avis Films. 2408 West Olive Avenue, Burbank, California 91506. Judy, a girl of primary age, learns that correct care of teeth includes proper brushing and visiting a dentist twice a year.
12. Film. Teeth White-Teeth Bright. 1965. 10 min. sd. Color. Sterling Educational Films. P. O. Box 8497, Universal City, Los Angeles, California 91608. Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.
14. Film. What Do We Know About Teeth. 1961. 15 min. sd. Color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois 60611. Discusses the importance of brushing teeth, how it is done, and why it is so important to visit the dentist.
15. Film Your Teeth. 1964. 6 min. sd. Color. B/W. Encyclopedia Britannica Educational Corp. 425 No. Michigan Avenue, Chicago, Illinois. 60611. Uses animation to show how the first teeth form and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.
23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611.

28. Film. A Dentist Visits the Classroom. 17 min. sd. Color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Presents a classroom situation where the children do research and reading on dental health before the dentist is invited to come to the school. The dentist discusses the importance of caring for the teeth.
30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook; Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.
32. Film. Tommy's Healthy Teeth. 11 min. sd. color. B/W. Coronet Films. 65 East South Water Street, Coronet Building, Chicago, Illinois. 60601. A boy visits a dental office, has a cavity filled, and learns that regular dental check-ups are as important to having healthy teeth as brushing them properly and eating the right foods.
33. Film. Learning to Use Your Brush. 11 min. sd. B/W. McGraw-Hill Textfilms. 330 West 42nd Street, New York, New York. 10018. Shows the techniques of using a toothbrush.
34. Film. A Matter of Choice. 1960. 30 min. sd. Color. B/W. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Discusses deciduous and permanent teeth, cleaning and brushing, and dental disease.
38. Filmstrip. Brush Up on Your Teeth. Color/Captions. American Dental Association, 211 E. Chicago Ave., Chicago, Illinois. 60611. Shows how to take care of the teeth. Includes proper food and emphasizes regular visits to the dentist.
40. Filmstrip. The Dentist. Color/Captions. Long Filmslide Service, 705 Fairmont Ave., El Cerrito, California. 94530. From the series-our community helpers.
41. Filmstrip. A Happy Day with Jane. Color/Captions. California Dairy Industry Prod., 3900 W. 3rd St., Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care.
42. Filmstrip. Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York. 11435. From the good health and you series – illustrates desirable patterns for young people.
43. Filmstrip. Herbie's Dream. Color/Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California. 90025. Shows proper dental care – eat the right foods, brush often and visit the dentist regularly.
45. Filmstrip. Karius and Baktus. Color. Modern Learning Aids, 1212 6th Ave., New York, New York. 10036. Puppets illustrate the importance of regular brushing of the teeth and having periodic dental check-ups.
47. Filmstrip. Let's Visit the Dentist. Color/Captions. Society for Visual Education, 1345 Diversey Pkwy., Chicago, Illinois. 60614.

From the Be Healthy, Go Safely-The Primary Way health set series shows basic health rules.

50. Filmstrip. Teeth. Color. Popular Science Publishing Co., 239 W. Fairview Blvd., Inglewood, California 90302. From the elementary science series – describes the development of teeth during the evolution of animal life. Explains importance of teeth, pictures baby teeth. Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth.
52. Filmstrip. We Take Good Care Of Our Teeth. Color. Herbert E. Budek, P. O. Box 307, Santa Barbara, California. 93102. Stresses proper dental care for young children.
54. Filmstrip. Good Dental Health Is Up To You. Color/Record. Proctor and Gamble, 301 E. Sixth St., Cincinnati, Ohio. 45202. Explains the causes of tooth decay and outlines a good dental program.
56. Filmstrip. Ten Little People and Their Teeth. Color. American Dental Association, 211 E. Chicago Ave., Chicago, Illinois. 60611. Presents the story of five people who took care of their teeth and five people who did not.
57. Filmstrip. Time for Healthy Teeth. Color/Record. 1963. Audio Productions Inc., 630 Ninth Ave., New York, New York. 10036. Attempts to induce the formation of good habits in proper care of the teeth.
58. Filmstrip. Your Teeth and Their Care. Color. Y.L.P. Materials Corp. Describes the different kinds of teeth and their structures and functions. Illustrates the spread of decay, the reason for decay and preventative procedure. From the health habits series. 1968.
62. Book. Green, Carla. I Want To Be A Dentist. Chicago. Children's Press. 1960. $1.50.
74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.
134. Filmstrip. Care of Teeth. 1959. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Ave., Tujunga, California. 91042. Shows some basic concepts in building health habits.
198. Filmstrip. Learning About Sleep and Rest. 1969. Color. Encyclopedia Britannica Educational Corp. 425 North Michigan Ave., Chicago, Illinois. 60611. Discusses health information and suggests action observations and investigations as ways of learning more about health.
224. Film. Brother Makes Sense. 1964. 16 min. sd. color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Ave., Chicago, Illinois. 60611. Shows a boy who has had experience with orthodonic bands, emphasizing to his younger sister that cleaning teeth properly and practicing good dental health habits are essential or health and appearance.

Measuring Devices

7. Make and name a puppet and prepare a dental health message for him each week. Message should be specific and accurate.
8. Use dental health words in word meaning contests.
31. Identify the dental health terms in a prepared anagram.
39. Keep a growth chart and periodically interpret changes.
48. Poster or collage may be done on one area of dental health and evaluated on accuracy and creativeness.
49. Bulletin board – having to do with dental health and graded on originality, clarity, appropriateness, and completeness.

UNIT TITLE – DENTAL HEALTH:HEALTH STATUS

Requestor Name – Miss James

Obj. 10

10. To describe the role of proper diet in the development and maintenance of dental health.

Content Outline

1. The teeth perform many functions, e.g.
   - Chew food
   - speak clearly
   - look attractive
   - have proper facial form.
2. Digestion is the process of converting food into a form for absorption.
3. A balanced diet helps to build healthy teeth.
4. Foods which contribute to the development of healthy teeth include dairy products, fruits, and vegetables.
6. Sweet foods and drinks, such as candy, cake, and soda are a primary contributing factor to tooth decay.
8. The chewing of sugared gum contributes to the development of tooth decay.
9. Chewing raw fruits and vegetables, such as apples, celery, and carrots, help to clean the teeth. Other foods which help to clean the teeth include lettuce, cucumbers, cabbage, and radishes.
10. Foods high in refined carbohydrates are readily converted into acids by the acid-forming bacteria present in the mouth.
24. Dental caries, which are commonly called tooth decay, destroys the structure of the teeth.
25. Reduction of dental caries can best be achieved by regular professional dental care
   - brushing the teeth correctly after eating
   - regular professional dental care on a recall basis
   - topical fluoride application and/or fluoridation of water supplies.
36. Pupils should take extra good care of the 6-year molars because they help to determine the shape of the jaws, the face, and the position of the other teeth, and cannot be replaced.
38. The permanent teeth are developing and growing in the jaws long before you can see them.
42. Primary teeth should ordinarily be retained until lost naturally because they are needed
   - for chewing
   - for appearance

50. A tooth is a living structure requiring food. It reacts to various stimuli such as temperature and pressure.

58. Bacteria are present in our mouth all of the time. Some of these bacteria make acids from the food left between our teeth.

64. Generally, foods necessary for maintaining oral health are the same as those needed for general physical health.

67. The use of fresh fruits and vegetables, milk and juices for between meal snacks is better for your teeth and general health than sweet snacks.

70. A lack of Vitamin C may cause bleeding of the gums.

71. There is a substantial amount of sugar in most popular foods. For example

ITEM	AMOUNT OF SUGAR	
Cola	10 oz.	7 4/5 Tsp.
Root beer	10 oz.	4 1/2 Tsp.
Candy bar	1-10 oz.	10-20 Tsp.
Cherry pie	1 Slice	10 Tsp.

81. Cavities begin with a small hole, usually in a fissure or flaw of a tooth, in an area where food may become lodged, or where it is difficult to remove food by brushing.

83. The most significant factors which may produce caries are
– the presence of certain aicd forming bacteria
– the presence of dental plaques
– the strength of the acids and the ability of the saliva to neutralize them
– the length of time the acids are in contact with the teeth
– susceptibility of the teeth to decay.

99. Periodontitis usually follows chronic gingivitis. As the inflammation spreads the gum withdraws from the tooth, forming a pocket which fills with bacteria and pus. This weakens the support of the tooth and may cause its loss.

100. Periodontal diseases can best be prevented by
– proper dental hygiene including the massaging of gums
– a well-balanced diet
– regular visits to the dentist.

123. Dental tape, or dental floss, can be used to remove food particles wedged between the teeth beyond the reach of the toothbrush.

133. Causes of halitosis are
– infected teeth or gums
– periodontal disease
– stomach disorders
– certain types of food, such as raw onions, cause temporary halitosis
– infections, in the nose, throat and lungs
– lung cancer
– smoking
– diabetes
– lack of proper oral hygiene.

138. Chewing food is important. Decayed teeth and sore gums may not permit one to chew efficiently.
139. Infection from diseased teeth can be carried through the blood stream to other parts of the body and set up another focus of infection.
185. Heredity, diet, and physical activity have a direct relationship to individual growth and development.
211. The individual has a definite responsibility for his personal health, and factual knowledge is essential in making decisions.
227. The teeth contribute to speech, proper mastication and appearance.
239. No statement of text.
398. Many factors contribute to the dental decay process. Among these are
    - developmental and systematic disturbances which may result in vulnerable teeth
    - dental plaque
    - mouth bacteria
    - the role of acids
    - the role of saliva
    - the role of food
    - irregular alignment
    - gum disorders
    - poor habits
    - emotional tensions, such as brixism (grinding of teeth, especially at night while sleeping.)

Small Group Activities

1. Discuss how and why chewing prepares the food for digestion.
5. Prepare a bulletin board display or a scrap book of foods which build strong teeth.
6. Collect pictures of snack foods, such as fresh fruits and vegetables, nuts, milk, and juices, that make delicious substitutes for sweet snacks that are high in refined carbohydrates. Use them for a bulletin board display or a class scrapbook.
7. Develop a card game similar to old maid utilizing dental health terms to be matched with picture representations. The old maid can be represented by Mr. Tooth Decay.
8. Cut out pictures of fresh fruit and vegetables and discuss why they might be called nature's toothbrush. Encourage children to bring these foods to be eaten at the end of their lunches.
12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
13. Invite a dental specialist to discuss proper methods of maintaining oral health.

20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines
21. Discuss the effect of dental health habits on personal appearance and health
99. Discuss and list on the blackboard good and poor dental health habits
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to
107. Invite a dentist to show the use of various instruments and answer questions pertaining to fillings, cleaning, X-rays, fluoride application, etc
130. Ask the school dentist and/or dental hygienist to discuss the importance of proper dental care.
170. Discuss tooth decay Describe the factors involved in tooth decay.
268. When discussing appropriate foods for dental health, prepare models for use on the flannel board and include poor foods models, but do not put flannel on the backs of these models. In discussing them when the attempt is made to place then on the board they will fall off indicating their poor quality.
269. Role-play or animate foods and how they may attack teeth. Costumes of different foods could be made from large bags.
271. Have the class make a Susie Goodtooth as a project Use a
 Milk carton for her body,
 Orange for her head,
 Small leaf of spinach or chard for her hair,
 Carrots for feet and legs.
 Stalks of celery for the arms
272. Have a bunny rabbit party in which celery, green pepper, and carrot sticks are served and discuss their importance in helping to clean the teeth Have students tell why these foods are important between meal snacks

Large Group Activities

1. Discuss how and why chewing prepares the food for digestion.
5. Prepare a bulletin board display or a scrap book of foods which build strong teeth
6. Collect pictures of snack foods such as fresh fruits and vegetables, nuts, milk, and juices, that make delicious substitutes for sweet snacks that are high in refined carbohydrates Use them for a bulletin board display or a class scrapbook
7. Develop a card game similar to old maid utilizing dental health terms to be matched with picture representations The old maid can be represented by M Tooth Decay
8. Cut out pictures of fresh fruit and vegetables and discuss why they might be called nature's toothbrush Encourage children to bring these foods to be eaten at the end of their lunches

12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
13. Invite a dental specialist to discuss proper methods of maintaining oral health.
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
22. Make and name a toothbrush puppet and prepare a dental health message for him each week. Some of the messages could be on the substitution of good dental health habits for poor dental health habits.
26. Discuss the process of dental decay.
27. Present a summary of this unit as a skit for an assembly program.
38. Discuss the importance of taking good care of the primary teeth.
43. Discuss the meaning of the following words

    Germ
    Acid
    Primary
    Appearance
    Digestion
    Amino acid
    Fluoride
    Permanent
    Dentist
    Enamel
    Calcium
    Caries
    Penetrates
    Carbohydrate

    These may also be used for spelling words. The teacher may wish to add other important terms.

46. Demonstrate the differences and similarities between human and animal teeth. Make a study of animals' teeth and compare kinds and functions to human teeth. Example – the central incisors, used for cutting food, can be compared to a horse's front teeth which are used for the same purpose.
48. Conduct a definition bee utilizing dental vocabulary.
52. Using questions compiled by the class, conduct a quiz program regarding the development, function, anatomy, and care of teeth.
62. Prepare such snacks as apple slices, dried fruit, celery, carrot sticks, and nuts that can be eaten between meals and discuss how satisfying they are to the appetite as well as the values of each kind of snack. Note how celery and carrot sticks help to cleanse the teeth.
73. Discuss the effects of poor bite on chewing food, speech patterns, and appearance.
75. Conduct a simple dramatic test that can be used to detect dental plaque deposits, i.e. apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth.
76. Review the structure of a tooth, then discuss the process of decay from the enamel and the dentin to the pulp.

86. Invite a dental health specialist to discuss the cause, effect, and treatment of periodontal diseases
88. Discuss the importance of maintaining the permanent teeth and good oral health throughout life
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to
107. Invite a dentist to show the use of various instruments and answer questions pertaining to fillings, cleaning, X-rays, fluoride application, etc.
130. Ask the school dentist and/or dental hygienist to discuss the importance of proper dental care.
131. Keep a daily health practice record which includes areas such as nutrition, sleep, and safety
170. Discuss tooth decay. Describe the factors involved in tooth decay.

Materials

3. Film. Billy Meets Tommy Tooth. 1960. 4 min. sd. B/W. National Apple Institute. Headquaters Bldg. Suite 410, 2000 P St. NW, Washington, D. C. 20036. A little boy who has just lost his tooth puts it under his pillow before retiring. He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
12. Film. Teeth White-Teeth Bright. 1965. 10 min. sd. Color. Sterling Educational Films. P. O. Box 8497, Universal City, Los Angeles, California. 91608. Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.
13. Film. Three R's For Healthy Smiles. 15 min. sd. Color. University of Southern California Dept. of Cinema, University Park, Los Angeles, California. 90007. A puppet film exhorting the importance of good health habits in the care of teeth.
15. Film. Your Teeth. 1964. 6 min. sd. Color. B/W. Encyclopedia Britannica Educational Corp. 425 No. Michigan Avenue, Chicago, Illinois. 60611. Uses animation to show how the first teeth form and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.
23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois 60611.
28. Film. A Dentist Visits The Classroom. 17 min. sd. Color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Presents a classroom situation where the children do research and reading on dental health before the dentist is invited to come to the school. The dentist discusses the importance of caring for the teeth.

30. Film Healthy Teeth, Happy Smile 1964 20 min sd Color Henk Newenhouse Inc 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene
32. Film Tommy's Healthy Teeth 11 min sd Color B/W. Coronet Films. 65 East South Water Street, Coronet Building, Chicago, Illinois. 60601 A boy visits a dental office, has a cavity filled, and learns that regular dental check-ups are as important to having healthy teeth as brushing them properly and eating the right foods.
34. Film. A Matter of Choice 1960 30 min sd Color. B/W. American Dental Association Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago Illinois 60611 Discusses deciduous and permanent teeth, cleaning and brushing, and dental disease.
38. Filmstrip Brush Up On Your Teeth Color/Captions. California Dairy Industry Prod , 3900 W 3rd St , Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care.
42. Filmstrip Health and Teeth Color/Captions Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York 11435 From the good health and you series – illustrates desirable patterns for young people.
43. Filmstrip Herbie's Dream Color/Record Bailey Film Association, 1159 Santa Monica Blvd , Los Angeles, California. 90025. Shows proper dental care Eat the right foods, brush often and visit the dentist regularly
50. Filmstrip Teeth Color Popular Science Publishing Co., 239 W. Fairview Blvd , Inglewood, California 90302 From the elementary science series – describes the development of teeth during the evolution of animal life Explains importance of teeth, pictures baby teeth Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth
52. Filmstrip We Take Good Care of Our Teeth Color Herbert E. Budek, P. O Box 307, Santa Barbara, California 93102. Stresses proper dental care for young children
54. Filmstrip Good Dental Health Is Up To You Color/Record. Proctor and Gamble, 301 E Sixth St , Cincinnati, Ohio 45202. Explains the causes of tooth decay and outlines a good dental health program
56. Filmstrip Ten Little People And Their Teeth Color American Dental Association, 211 E Chicago Ave , Chicago, Illinois. 60611. Presents the story of five people who took care of their teeth and five people who did not
57. Filmstrip Time For Healthy Teeth Color/Record 1963. Audio Productions Inc , 630 Ninth Avenue, New York, New York 10036 Attempts to induce the formation of good habits in proper care of the teeth

58. Filmstrip Your Teeth and Their Care Color Y.L.P. Materials Corp. Describes the different kinds of teeth and their structures and functions. Illustrates the spread of decay, the reason for decay and preventative procedure From the health habits series. 1968.
74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council Program Service Dept., 111 N. Canal St., Chicago, Illinois.
134. Filmstrip. Care Of Teeth 1959. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Ave., Tujunga, California. 91042. Shows some basic concepts in building health habits.
143. Filmstrip Food For Health 1958. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Ave., Tujunga, California. 91042. Points out the need for following health and safety rules at home and at school.
181. Filmstrip. Your Food. 1968 With Record. Coronet Films. 65 East South Water St., Coronet Building, Chicago, Illinois. 60601. Shows the function of eating and the importance of good eating habits.
192. Filmstrip. Learning About Germs 1969 Color Encyclopedia Britannica Educational Corp 425 North Michigan Ave., Chicago, Illinois. 60611. Discusses health information and suggests action observations and investigations as ways of learning more about health.
198. Filmstrip. Learning About Sleep and Rest 1969. Color. Encyclopedia Britannica Educational Corp 425 North Michigan Ave., Chicago, Illinois 60611 Discusses health information and suggests action observations and investigations as ways of learning more about health
226. Film. Gateway To Health 1954 20 min. sd. Color. National Apple Institute. Headquarters Building Suite 410, 2000 P Street North West, Washington, D C. 20036 Presents the value of fruit and vegetables as part of diet for dental health Emphasizes apple eating for cleaning teeth.

Measuring Devices

7. Make and name a puppet and prepare a dental health message for him each week. Message should be specific and accurate.
8. Use dental health words in word meaning contests.
17. Analyze a week's menu in terms of foods that are detrimental to good dental health
18. Prepare posters and charts of foods which are rich in vitamins and minerals.
30. Discuss or list the functions for each kind of tooth.
31. Identify the dental health terms in a prepared anagram.
39. Keep a growth chart and periodically interpret changes.
40. Construct a collage, poster and/or bulletin board related to health status.

48. Poster or collage may be done on one area of dental health and evaluated on accuracy and creativeness.

UNIT TITLE – DENTAL HEALTH HEALTH STATUS

Student Name – Fisher Larry

Obj. 5

5. To utilize sound protective measures against accidents to oral structures

Individual Activities

20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines
28. Write and/or illustrate a comparative life story of an unhealthy tooth and a healthy tooth
48. Conduct a definition bee utilizing dental vocabulary.
90. Investigate the incidence of dental injuries within your school environment Explain the importance of immediate attention to broken, loosened, or lost teeth
98. Discuss ways we can prevent dental injuries at school and at play. (This could be the basis of a bulletin board display.)
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to
131. Keep a daily health practice record which includes areas such as nutrition, sleep, and safety

Individual Materials

3. Film. Billy Meets Tommy Tooth 1960 4 min. sd B/W. National Apple Institute Headquaters Bldg Suite 410, 2000 P St. NW, Washington, D C 20036 A little boy who has just lost his tooth puts it under his pillow before retiring He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
13. Film Three R's For Healthy Smiles 15 min. sd Color. University of Southern California Dept of Cinema, University Park, Los Angeles, California 90007 A puppet film exhorting the importance of good health habits in the care of teeth
15. Film. Your Teeth 1964 6 min sd Color B/W Encyclopedia Britannica Educational Corp 425 No Michigan Avenue, Chicago, Illinois. 60611 Uses animation to show how the first teeth form and are replaced by larger, permanent teeth Shows the way decay can start, and stresses the importance of good dental habits and good food
23. Film Project Teeth American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611

30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.
32. Film. Tommy's Healthy Teeth. 11 min. sd. Color. B/W. Coronet Films. 65 East South Water Street, Coronet Building, Chicago, Illinois 60601. A boy visits a dental office, has a cavity filled, and learns that regular dental check-ups are as important to having healthy teeth as brushing them properly and eating the right foods.
42. Filmstrip. Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York. 11435. From the good health and you series – illustrates desirable patterns for young people.
50. Filmstrip. Teeth. Color. Popular Science Publishing Co., 239 W. Fairview Blvd., Inglewood, California. 90302. From the Elementary Science Series – describes the development of teeth during the evolution of animal life. Explains importance of teeth, pictures baby teeth. Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth.
74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.

UNIT TITLE – DENTAL HEALTH:HEALTH STATUS

Student Name – Brocato, Phillip

Obj. 5

5. To utilize sound protective measures against accidents to oral structures.

Individual Activities

20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
48. Conduct a definition bee utilizing dental vocabulary.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.

Individual Materials

3. Film. Billy Meets Tommy Tooth. 1960. 4 min. sd. B/W. National Apple Institute. Headquaters Bldg. Suite 410, 2000 P St. NW, Washington, D. C. 20036. A little boy who has just lost his tooth puts it under his pillow before retiring. He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
13. Film. Three R's For Healthy Smiles. 15 min. sd. Color. University of Southern California Dept. of Cinema, University Park, Los Angeles, California. 90007. A puppet film exhorting the importance of good health habits in the care of teeth.
15. Film. Your Teeth. 1964. 6 min. sd. Color. B/W. Encyclopedia Britannica Educational Corp. 425 No. Michigan Avenue, Chicago, Illinois. 60611. Uses animation to show how the first teeth form and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.
23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611.
30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.
42. Filmstrip. Health and Teeth. Color. Captions. Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York. 11435. From the Good Health and You Series – illustrates desirable patterns for young people.

50. Filmstrip. Teeth. Color. Popular Science Publishing Co., 239 W. Fairview Blvd., Inglewood, California. 90302. From the Elementary Science Series – Describes the development of teeth during the evolution of animal life. Explains importance of teeth, pictures baby teeth. Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth.
74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.

UNIT TITLE – DENTAL HEALTH HEALTH STATUS

Student Name – Brocato Philip

Obj. 1

1. To practice daily activities known to contribute to better health.

Individual Activities

12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
14. Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration. Make a chart showing the correct method of brushing the teeth.
17. Have children keep personal records of toothbrushing.
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
25. Study a cross section of a molar with decay.
48. Conduct a definition bee utilizing dental vocabulary.
75. Conduct a simple dramatic test that can be used to detect dental plaque deposits, i.e. apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth.
81. Invite a dentist to school or send groups to a dentist to examine X-rays showing
    - Decay
    - Small hidden cavities
    - Fillings
    - Abscesses
    - Bony destruction in pyorrhea cases
    - Impacted teeth
    - Malformed roots
82. Examine tooth decay bacteria under a microscope.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.
271. Have the class make a Susie Goodtooth as a project. Use a
    Milk carton for her body,
    Orange for her head,
    Small leaf of spinach or chard for her hair,
    Carrots for feet and legs,
    Stalks of celery for the arms.

Individual Materials

1. Film. Maxwell, Boy Explorer. 7 min. sd. Color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Three animated small boys found a lost civilization No-De-Kay and discover that the secret of it is proper toothbrushing. they demonstrate the proper and effective use of the toothbrush.
3. Film. Billy Meets Tommy Tooth. 1960. 4 min. sd. B/W. National Apple Institute, Headquaters Bldg. Suite 410, 2000 P. St. NW, Washington, D. C. 20036. A little boy who has just lost his tooth puts it under his pillow before retiring. He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
5. Film. The Day That Suzie Lost Her Smile. 1959. 4 min. sd. Color. Modern Talking Picture Service, 1212 Avenue of the Americas, New York, New York. 10036. A cartoon on dental hygiene in which the world of Suzie Smilebrite almost crumbled when her hero, Bill Blue-Eyes, said her smile had disappeared. Concludes with Suzie recapturing her smile and her man.
9. Film. Karius and Baktus. 1968. 16 min. sd. Color. Modern Learning Aids. 16 Spear Street, San Francisco, California. 94105. Story of two trolls living in the mouth of a small boy illustrates the importance of regular toothbrushing.
12. Film. Teeth White-Teeth Bright. 1965. 10 min. sd. Color. Sterling Educational Films. P. O. Box 8497, Universal City, Los Angeles, California. 91608. Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.
13. Film. Three R's For Healthy Smiles. 15 min. sd. Color. University of Southern California Dept. of Cinema, University Park, Los Angeles, California. 90007. A puppet film exhorting the importance of good health habits in the care of teeth.
15. Film Your Teeth. 1964. 6 min. sd. Color. B/W. Encyclopedia Britannica Educational Corp. 425 No. Michigan Avenue, Chicago, Illinois. 60611. Uses animation to show how the first teeth form and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.
23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 2[illegible] East Chicago Avenue, Chicago, Illinois. 60611.
30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.

34. Film. A Matter of Choice. 1960. 30 min. sd. Color. B/W. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Discusses deciduous and permanent teeth, cleaning and brushing, and dental disease.
38. Filmstrip. Brush Up On Your Teeth. Color/Captions. American Dental Association, 211 E. Chicago Avenue, Chicago, Illinois. 60611. Shows how to take care of the teeth. Includes proper food and emphasizes regular visits to the dentist.
42. Filmstrip. Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Avenue, Jamaica, New York. 11435. From the Good Health and You Series – Illustrates desirable patterns for young people.
43. Filmstrip. Herbie's Dream. Color. Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California 90025. Shows proper dental care. Eat the right foods, brush often and visit the dentist regularly.
45. Filmstrip. Karius and Baktus. Color. Modern Learning Aids, 1212 6th Avenue, New York, New York. 10036. Puppets illustrate the importance of regular brushing of the teeth and having periodic dental check-ups.
50. Filmstrip. Teeth. Color. Popular Science Publishing Co., 239 W. Fairview Blvd., Inglewood, California. 90302. From the Elementary Science Series – Describes the development of teeth during the evolution of animal life. Explains importance of teeth, pictures baby teeth. Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth.
52. Filmstrip. We Take Good Care of Our Teeth. Color. Herbert E. Budek, P. O. Box 307, Santa Barbara, California; 93102. Stresses proper dental care for young children.
57. Filmstrip. Time for Healthy Teeth. Color. Record. 1963. Audio Productions Inc., 630 Ninth Ave., New York, New York. 10036. Attempts to induce the formation of good habits in proper care of the teeth.
74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.
77. Poster. Swish and Swallow Poster. American Dental Association. 211 E. Chicago Avenue, Chicago, Illinois. Paper – $.25. Laminated – $3.50.
80. Chart. Toothbrushing Chart. American Dental Association. 211 E. Chicago Avenue, Chicago, Illinois. 921 x 25½ inches. $.65.
81. Chart. Toothbrushing Wall Chart. Pepsodent Division, Lever Brothers Co. Cambridge, Massachusetts.
134. Filmstrip. Care of Teeth. 1959. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.
198. Filmstrip. Learning About Sleep and Rest. 1969. Color. Encyclopedia Britannica Educational Corp. 425 North Michigan

Avenue, Chicago, Illinois. 60611. Discusses health information and suggests action observations and investigations as ways of learning more about health.

UNIT TITLE – DENTAL HEALTH HEALTH STATUS

Student Name – Bowser, Geraldine

Obj. 6

6. To value the continuous need to improve dental health status.

Individual Activities

12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
14. Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration. Make a chart showing the correct method of brushing the teeth.
76. Review the structure of a tooth, then discuss the process of decay from the enamel and the dentin to the pulp
271. Have the class make a Susie Goodtooth as a project use a
Milk Carton for her body,
Orange for her head,
Small leaf of spinach or chard for her hair,
Carrots for her feet and legs,
Stalks of celery for the arms.

Individual Materials

1. Film. Maxwell, Boy Explorer. 7 min. sd. Color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Three animated small boys found a lost civilization No-De-Kay and discover that the secret of it is proper toothbrushing. They demonstrate the proper and effective use of the toothbrush.
5. Film. The Day that Suzie Lost Her Smile. 1959. 4 min. sd. Color. Modern Talking Picture Service. 1212 Avenue of the Americas, New York, New York. 10036. A cartoon on dental hygiene in which the world of Suzie Smilebrite almost crumbled when her hero, Bill Blue-Eyes, said her smile had disappeared. Concludes with Suzie recapturing her smile and her man.
13. Film. Three R's for Healthy Smiles. 15 min. sd. Color. University of Southern California Dept. of Cinema, University Park, Los Angeles, California. 90007. A puppet film exhorting the importance of good health habits in the care of teeth.
30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.

33. Film. Learning to Use Your Brush. 11 min. sd. B/W. McGraw-Hill Textfilms. 330 West 42nd Street. New York, New York 10018. Shows the techniques of using a toothbrush.
38. Filmstrip. Brush Up on Your Teeth. Color/Captions. American Dental Association, 211 E. Chicago Avenue, Chicago, Illinois. 60611. Shows how to take care of the teeth. Includes proper food and emphasizes regular visits to the dentist.
40. Filmstrip. The Dentist. Color/Captions. Long Filmslide Service, 705 Fairmont Avenue, El Cerrito, California. 94530. From the series – Our Community Helpers.
41. Filmstrip. A Happy Day With Jane. Color/Captions. California Dairy Industry Prod., 3900 W. 3rd St., Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care.
42. Filmstrip. Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Avenue, Jamaica, New York 11435. From the Good Health and You series – Illustrates desirable patterns for young people.
43. Filmstrip. Herbie's Dream. Color/Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California 90025. Shows proper dental care. Eat the right foods, brush often and visit the dentist regularly.
45. Filmstrip. Karius and Baktus. Color. Modern Learning Aids. 1212 6th Avenue, New York, New York 10036. Puppets illustrate the importance of regular brushing of the teeth and having periodic dental check-ups.
47. Filmstrip. Let's Visit the Dentist. Color/Captions. Society for Visual Education, 1345 Diversey Pkwy., Chicago, Illinois. 60614. From the be healthy go safely the primary way health set series shows basic health rules.
52. Filmstrip. We Take Good Care Of Our Teeth. Color. Herbert E. Budek, P. O. Box 307, Santa Barbara, California 93102. Stresses proper dental care for young children.
74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.
77. Poster. Swish and Swallow Poster. American Dental Association. 211 E. Chicago Avenue, Chicago, Illinois. Paper – $.25. Laminated – $3.50
134. Filmstrip. Care of Teeth. 1959. Color with captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.

UNIT TITLE – DENTAL HEALTH.HEALTH STATUS

Student Name – Washington, Debra

Obj. 6

6. To value the continuous need to improve dental health status.

Individual Activities

12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
14. Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration. Make a chart showing the correct method of brushing the teeth.
17. Have children keep personal records of toothbrushing.
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
25. Study a cross-section of a molar with decay.
41. Discuss why a dentist will often put in a space maintainer if a primary molar is extracted prematurely.
75. Conduct a simple dramatic test that can be used to detect dental plaque deposits. i.e. apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth.
76. Review the structure of a tooth, then discuss the process of decay from the enamel and the dentin to the pulp.
81. Invite a dentist to school or send groups to a dentist to examine X-rays showing
    - – Decay
    - – Small hidden cavities
    - – Fillings
    - – Abscesses
    - – Bony destruction in pyorrhea cases
    - – Impacted teeth
    - – Malformed roots
82. Examine tooth decay bacteria under a microscope.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.
151. Discuss what to do when hurt.
271. Have the class make a Susie Goodtooth as a project. Use a
    Milk carton for her body.
    Orange for her head.
    Small leaf of spinach or chard for her hair.
    Carrots for feet and legs,
    Stalks of celery for the arms

Individual Materials

1. Film. Maxwell, Boy Explorer 7 min sd Color American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois 60611 Three animated small boys found a lost civilization No-De-Kay and discover that the secret of it is proper toothbrushing. They demonstrate the proper and effective use of the toothbrush
3. Film. Billy Meets Tommy Tooth. 1960. 4 min. sd. B/W. National Apple Institute. Headquaters Bldg. Suite 410, 2000 P St. NW, Washington, D. C. 20036 A little boy who has just lost his tooth puts it under his pillow before retiring. He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
5. Film. The Day That Suzie Lost Her Smile 1959 4 min. sd. Color. Modern Talking Picture Service 1212 Avenue of the Americas, New York, New York 10036 A cartoon on dental hygiene in which the world of Suzie Smilebrite almost crumbled when her hero, Bill Blue-Eyes, said her smile had disappeared. Concludes with Suzie recapturing her smile and her man
9. Film. Karius and Baktus 1968 16 min sd Color. Modern Learning Aids 16 Spear Street, San Francisco, California. 94105. Story of two trolls living in the mouth of a small boy illustrates the importance of regular toothbrushing
12. Film. Teeth White-Teeth Bright 1965. 10 min. sd. Color. Steriling Educational Films. P. O. Box 8497, Universal City, Los Angeles, California. 91608 Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.
13. Film. Three R's for Healthy Smiles 15 min sd Color. University of Southern Calfiornia Dept of Cinema, University Park, Los Angeles, California 90007 A puppet film exhorting the importance of good health habits in the care of teeth.
15. Film. Your Teeth 1964 6 min sd Color B/W. Encyclopedia Britannica Educational Corp. 425 No. Michigan Avenue, Chicago, Illinois. 60611 Uses animation to show how the first teeth form and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.
23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611.
30. Film. Healthy Teeth Happy Smile 1964 20 min sd Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene
33. Film. Learning to Use Your Brush 11 min sd B/W McGraw-Hill Textfilms. 330 West 42nd Street. New York, New York 10018. Shows the techniques of using a toothbrush

34. Film. A Matter of Choice 1960 30 min sd Color B/W. American Dental Association Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois 60611 Discusses deciduous and permanent teeth, cleaning and brushing, and dental disease.
38. Filmstrip. Brush Up On Your Teeth Color/Captions American Dental Association, 211 E. Chicago Avenue, Chicago, Illinois. 60611. Shows how to take care of the teeth Includes proper food and emphasizes regular visits to the dentist
40. Filmstrip. The Dentist Color/Captions. Long Filmslide Service, 705 Fairmont Avenue El Cerrito, California 94530 From the series – Our Community Helpers
41. Filmstrip A Happy Day With Jane Color/Captions. California Dairy Industry Prod., 3900 W. 3rd St., Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care
42. Filmstrip Health and Teeth Color/Captions Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York 11435. From the good health and you series – Illustrates desirable patterns for young people
43. Filmstrip Herbie's Dream Color Record Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles California 90025. Shows proper dental care Eat the right foods, brush often and visit the dentist regularly
47. Filmstrip Let's Visit the Dentist Color/Captions Society for Visual Education. 1345 Diversey Pkwy., Chicago, Illinois. 60614. From the Be Healthy, Go Safely-The Primary Way Health Set series shows basic health rules
50. Filmstrip. Teeth Color Popular Science Publishing Co., 239 W. Fairview Blvd., Inglewood, California 90302 From the Elementary Science Series – Describes the development of teeth during the evolution of animal life Explains importance of teeth, pictures baby teeth Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth
52. Filmstrip. We Take Good Care Of Our Teeth Color. Herbert T. Budek, P. O. Box 307, Santa Barbara, California 93102. Stresses proper dental care for young children
57. Filmstrip. Time for Healthy Teeth Color/Record 1963. Audio Productions Inc., 630 Ninth Ave., New York. New York. 10036. Attempts to induce the formation of good habits in proper care of the teeth.
80. Chart. Toothbrushing Chart American Dental Association. 211 E. Chicago Avenue, Chicago, Illinois 921 x 25½ inches $.65.
81. Chart. Toothbrushing Wall Chart Pepsodent Division, Lever Brothers Co Cambridge. Massachusetts
134. Filmstrip Care of Teeth 1959 Color with Captions Herbert M. Elkins Co. 10031 Commerce Avenue Tujunga, California. 91042. Shows some basic concepts in building health habits

198. Filmstrip. Learning About Sleep and Rest. 1969. Color. Encyclopedia Britannica Educational Corp. 425 North Michigan Avenue, Chicago, Illinois. 60611. Discusses health information and suggests action observations and investigations as ways of learning more about health.

UNIT TITLE – DENTAL HEALTH HEALTH STATUS

Student Name – Washington, Debra

Obj. 5

5. To utilize sound protective measures against accidents to oral structures

Individual Activities

20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to

Individual Materials

3. Film. Billy Meets Tommy Tooth 1960 4 min sd B/W. National Apple Institute Headquaters Bldg Suite 410 2000 P St. NW, Washington D C 20036 A little boy who has just lost his tooth puts it under his pillow before retiring He dreams that the tooth comes to life and tells him how to take care of a permanent tooth.
13. Film. Three R's for Healthy Smiles 15 min sd Color. University of Southern California Dept of Cinema, University Park, Los Angeles, California 90007 A puppet film exhorting the importance of good health habits in the care of teeth.
15. Film. Your Teeth 1964 6 min sd Color B/W. Encyclopedia Britannica Educational Corp 425 No Michigan Avenue, Chicago, Illinois 60611 Uses animation to show how the first teeth form and are replaced by larger, permanent teeth Shows the way decay can start, and stresses the importance of good dental habits and good food.
23. Film. Project Teeth American Dental Association Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611.
30. Film. Healthy Teeth, Happy Smile 1964 20 min sd Color. Henk Newenhouse Inc 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene
41. Filmstrip A Happy Day With Jane Color/Captions California Dairy Industry Prod., 3900 W 3rd St, Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care
42. Filmstrip Health and Teeth Color/Captions Eye Gate House Inc., 146-01 Archer Avenue, Jamaica, New York 11435 From the Good Health and You series – Illustrates desirable patterns for young people

50. Filmstrip. Teeth. color. Popular Science Publishing Co., 239 W. Fairview Blvd., Inglewood, California. 90302. From the Elementary Science series – Describes the development of teeth during the evolution of animal life. Explains importance of teeth, pictures baby teeth. Shows diagrams of the parts of a tooth. Discusses the proper care of the teeth.

UNIT TITLE – DENTAL HEALTH HEALTH STATUS

Student Name – Inscor, George

Obj. 6

6. To value the continuous need to imporve dental health status.

Individual Activities

14. Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration. Make a chart showing the correct method of brushing the teeth.
20. Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines.
75. Conduct a simple dramatic test that can be used to detect dental plaque deposits i.e. apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth.
76. Review the structure of a tooth, then discuss the process of decay from the enamel and the dentin to the pulp.
100. Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to.
131. Keep a daily health practice record which includes areas such as nutrition, sleep, and safety.
271. Have the class make a Susie Goodtooth as a project. Use a
Milk carton for her body,
Orange for her head,
Small leaf of spinach or chard for her hair,
Carrots for feet and legs,
Stalks of celery for the arms.

Individual Materials

12. Film. Teeth White-Teeth Bright. 1965. 10 min. sd. Color. Sterling Educational Films. P. O. Box 8497, Universal City, Los Angeles, California. 91608. Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.
13. Film. Three R's for Healthy Smiles. 15 min. sd. color. University of Southern California Dept. of Cinema, University Park, Los Angeles, California. 90007. A puppet film exhorting the importance of good health habits in the care of teeth.

15. Film Your Teeth 1964 6 min sd color B/W Encyclopedia Britannica Educational Corp 425 No Michigan Avenue, Chicago, Illinois 60611 Uses animation to show how the first teeth form and are replaced by larger, permanent teeth Shows the way decay can start, and stresses the importance of good dental habits and good food

23 Film Project Teeth American Dental Association Bureau of Audio-Visual Services 211 East Chicago Avenue Chicago, Illinois 60611

30 Film Healthy Teeth, Happy Smile 1964 20 min sd color Henk Newenhouse Inc 1017 Longaker Road Northbrook, Illinois 60062 Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene

32 Film Tommy's Healthy Teeth 11 min sd color B/W Coronet Films 65 East South Water Street Coronet Building, Chicago, Illinois 60601 A boy visits a dental office, has a cavity filled, and learns that regular dental check-ups are as important to having healthy teeth as brushing them properly and eating the right foods

33. Film Learning to Use Your Brush 11 min sd color B/W McGraw Hill Textfilms 330 West 42nd Street, New York, New York 10018 Shows the techniques of using a toothbrush

34 Film A Matter of Choice 1960 30 min sd color B/W American Dental Association Bureau of Audio Visual Services, 211 East Chicago Avenue, Chicago Illinois 60611 Discusses deciduous and permanent teeth cleaning and brushing, and dental disease

43 Filmstrip Herbie's Dream Color Record Bailey Film Association, 1159 Santa Monica Blvd , Los Angeles, California 90025 Shows proper dental care Eat the right foods, brush often and visit the dentist regularly

57 Filmstrip Time for Healthy Teeth Color Record 1963 Audio Productions Inc , 630 Ninth Avenue, New York, New York 10036 Attempts to induce the formation of good habits in proper care of the teeth

134 Filmstrip Care of Teeth 1959 Color with captions Herbert M Elkins Co 10031 Commerce Avenue Tujunga, California 91042 Shows some basic concepts in building health habits

198 Filmstrip Learning About Sleep and Rest 1969 Color Encyclopedia Britannica Educational Corp 425 North Michigan Ave , Chicago Illinois 60611 Discusses health information and suggests action observations and investigations as ways of learning more about health

UNIT TITLE – DENTAL HEALTH.HEALTH STATUS

Student Name – Inscor, George

Obj. 1

1. To practice daily activities known to contribute to better health.

Individual Activities

14 Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration Make a chart showing the correct method of brushing the teeth

20 Prepare scrapbooks of pictures about teeth and oral hygiene drawn by children or obtained from magazines

75 Conduct a simple dramatic test that can be used to detect dental plaque deposits i e apply to the teeth, commercial tablets or a harmless food dye which will stain clumps of material sticking to the teeth

100 Explain the formation of habits, why substituting a good habit is often the best way to break a poor habit, and why it is often hard to break bad habits even if you want to

131 Keep a daily health practice record which includes areas such as nutrition, sleep, and safety

271 Have the class make a Susie Goodtooth as a project. Use a
Milk carton for her body,
Orange for her head,
Small leaf of spinach or chard for her hair,
Carrots for feet and legs,
Stalks of celery for the arms

Individual Materials

12 Film. Teeth White-Teeth Bright 1965 10 min sd color. Sterling Educational Films P O Box 8497, Universal City, Los Angeles, California 91608 Shows a young boy caring for his teeth and emphasizes the importance of brushing correctly, drinking milk, eating the right foods, and having regular check-ups.

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and are replaced by larger, permanent teeth. Shows the way decay can start, and stresses the importance of good dental habits and good food.

23. Film. Project Teeth. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611.
30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. Color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.
32. Film. Tommy's Healthy Teeth. 11 min. sd. Color. B/W. Coronet Films. 65 East South Water Street, Coronet Building, Chicago, Illinois. 60601. A boy visits a dental office, has a cavity filled, and learns that regular dental check-ups are as important to having healthy teeth as brushing them properly and eating the right foods.
33. Film. Learning to Use Your Brush. 11 min. sd. B/W. McGraw-Hill Textfilms. 330 West 42nd Street, New York, New York. 10018. Shows the techniques of using a toothbrush.
34. Film. A Matter of Choice. 1960. 30 min. sd. Color. B/W. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Discusses deciduous and permanent teeth, cleaning and brushing, and dental disease.
43. Filmstrip. Herbie's Dream. Color/Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California. 90025. Shows proper dental care. Eat the right foods, brush often and visit the dentist regularly.
57. Filmstrip. Time for Healthy Teeth. Color/Record. 1963. Audio Productions Inc., 630 Ninth Avenue, New York, New York. 10036. Attempts to induce the formation of good habits in proper care of the teeth.
134. Filmstrip. Care of Teeth. 1969. Color with captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.
198. Filmstrip. Learning About Sleep and Rest. 1969. Color. Encyclopedia Britannica Educational Corp. 425 North Michigan Avenue, Chicago Illinois. 60611. Discusses health information and suggests action observations and investigations as ways of learning more about health.

UNIT TITLE – DENTAL HEALTH HEALTH STATUS

Student Name – Edmondston, Diane

Obj. 21

21 To define those daily activities which have a positive effect on personal health

Individual Activities

142 Make full size silhouettes on a white piece of paper using the shadow from a lamp Use silhouette to comment on correct posture

145 Construct and use a jointed doll of heavy cardboard to illustrate good and poor posture

181 Demonstrate foot exercises with the aid of the physical education teacher or the school nurse-teacher

Individual Materials

1 Film Maxwell, Boy Explorer 7 min sd Color American Dental Association Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago Illinois 60611 Three animated small boys found a lost civilization No-De-Kay and discover that the secret of it is proper toothbrushing They demonstrate the proper and effective use of the toothbrush

5 Film The Day That Suzie Lost Her Smile 1959 4 min sd Color. Modern Talking Picture Service 1212 Avenue of the Americas, New York, New York 10036 A cartoon on dental hygiene in which the world of Suzie Smilebrite almost crumbled when her hero, Bill Blue-Eyes, said her smile had disappeared Concludes with Suzie recapturing her smile and her man

13 Film Three R s for Healthy Smiles 15 min sd Color University of Southern California Dept of Cinema, University Park, Los Angeles, California 90007 A puppet film exhorting the importance of good health habits in the care of teeth

30 Film Healthy Teeth, Happy Smile 1964 20 min sd Color Henk Newenhouse Inc 1017 Longaker Road, Northbrook, Illinois. 60062 Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene

33 Film Learning to Use Your Brush 11 min sd B/W McGraw-Hill Textfilms 330 West 42nd Street, New York, New York 10018. Shows the techniques of using a toothbrush

38 Filmstrip Brush Up on Your Teeth Color Captions American Dental Association, 211 E Chicago Avenue, Chicago, Illinois.

60611. Shows how to take care of the teeth. Includes proper food and emphasizes regular visits to the dentist.

41. Filmstrip. A Happy Day With Jane. Color Captions. California Dairy Industry Prod., 3900 W. 3rd St., Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care.
42. Filmstrip. Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York. 11435. From the Good Health and You series – Illustrates desirable patterns for young people.
43. Filmstrip. Herbie's Dream. Color/Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California. 90025. Shows proper dental care. Eat the right foods, brush often and visit the dentist regularly.
45. Filmstrip. Karius and Baktus. Color. Modern Learning Aids, 1212 6th Avenue, New York, New York. 10036. Puppets illustrate the importance of regular brushing of the teeth and having periodic dental check-ups.
52. Filmstrip. We Take Good Care of Our Teeth. Color. Herbert E. Budek, P. O. Box 307, Santa Barbara, California. 93102. Stresses proper dental care for young children.
74. Poster. Brush Your Teeth. Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.
77. Poster. Swish and Swallow Poster. American Dental Association. 211 E. Chicago Avenue, Chicago, Illinois. Paper – $.25. Laminated – $3.50.
125. Film. How Billy Keeps Clean. 1957. 11 min. sd. Color. B/W. Coronet Films. 65 East South Water Street, Coronet Building, Chicago, Illinois. 60601. Shows how to wash hands, face, neck, ears, and body. Describes when to wash, and points out that cleanliness helps keep a person healthy and nice to be near.
126. Film. Living and Growing. 1957. 11 min. sd. Color. Churchill Films. 662 North Robertson Blvd., Los Angeles, California. 90069. Shows two children studying how things grow by watching a litter of newly born rabbits. The children learn that they need the same things for living and growing – shelter, food and rest.
132. Filmstrip. Avoiding Germs. 1959. Color with captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.
133. Filmstrip. Care of the Nose and Throat. 1959. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.
134. Filmstrip. Care of Teeth. 1959. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Ave., Tujunga, California. 91042. Shows some basic concepts in building health habits.

135. Filmstrip. Cleanliness. 1959. Color with captions. Herbert M. Elkins Co. 10031 Commerce Ave., Tunjunga, California. 91042. Shows some basic concepts in building health habits.
136. Filmstrip. Cooperating With Others. 1959. Color with captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.
137. Filmstrip Good Health Ahead. 1959. Color with captions. Herbert M. Elkins Co. 10031 Commerce Ave., Tujunga, California. 91042. Shows some basic concepts in building health habits.

UNIT TITLE – DENTAL HEALTH:HEALTH STATUS

Student Name – Edmondston, Diane

Obj. 1

1. To practice daily activities known to contribute to better health.

Individual Activities

12. Soak a tooth in vinegar for two days, then have the children feel how soft the enamel is. Relate this demonstration to the effect of the acid in our mouth on the calcium in our teeth.
14. Use a model to demonstrate the proper way to brush the teeth. Let the children do some of the demonstration. Make a chart showing the correct method of brushing the teeth.
81. Invite a dentist to school or send groups to a dentist to examine X-rays showing
    - Decay
    - Small hidden cavities
    - Fillings
    - Abscesses
    - Bony destruction in pyorrhea cases
    - Malformed roots.
271. Have the class make a Susie Goodtooth as a project. Use a
    Milk carton for her body,
    Orange for her head,
    Small leaf of spinach or chard for her hair,
    Carrots for feet and legs,
    Stalks of celery for the arms.

Individual Materials

1. Film. Maxwell, Boy Explorer 7 min. sd. color. American Dental Association. Bureau of Audio-Visual Services, 211 East Chicago Avenue, Chicago, Illinois. 60611. Three animated small boys found a lost civilization No-De-Kay and discover that the secret of it is proper toothbrushing. They demonstrate the proper and effective use of the toothbrush.
5. Film. The Day That Suzie Lost Her Smile. 1959. 4 min. sd. Color. Modern Talking Picture Service 1212 Avenue of the Americas, New York, New York 10036. A cartoon on dental hygiene in which the world of Suzie Smilebrite almost crumbled when her hero, Bill Blue-Eyes, said her smile had disappeared. Concludes with Suzie recapturing her smile and her man.

13. Film. Three R's for Healthy Smiles. 15 min. sd. Color. University of Southern California Dept. of Cinema, University Park, Los Angeles, California 90007. A puppet film exhorting the importance of good health habits in the care of teeth.
30. Film. Healthy Teeth, Happy Smile. 1964. 20 min. sd. color. Henk Newenhouse Inc. 1017 Longaker Road, Northbrook, Illinois. 60062. Describes preventive dental care, proper diet, and good grooming habits as related to oral hygiene.
33. Film. Learning to Use Your Brush. 11 min. sd. B/W. McGraw-Hill textfilms. 330 West 42nd Street, New York, New York. 10018. Shows the techniques of using a toothbrush.
38. Filmstrip. Brush Up On Your Teeth. Color/Captions. American Dental Association, 211 E. Chicago Avenue, Chicago, Illinois. 60611. Shows how to take care of the teeth. Includes proper food and emphasizes regular visits to the dentist.
41. Filmstrip. A Happy Day With Jane. Color/Captions. California Dairy Industry Prod., 3900 W. 3rd St., Los Angeles, California. Follows the activities of a primary girl from early morning through bedtime, stressing dental care.
42. Filmstrip. Health and Teeth. Color/Captions. Eye Gate House Inc., 146-01 Archer Ave., Jamaica, New York 11435. From the Good Health and You series – Illustrates desirable patterns for young people.
43. Filmstrip. Herbie's Dream. Color/Record. Bailey Film Association, 1159 Santa Monica Blvd., Los Angeles, California 90025. Shows proper dental care. Eat the right foods, brush often and visit the dentist regularly.
45. Filmstrip. Karius and Baktus. Color. Modern Learning Aids, 1212 6th Ave., New York, New York 10036. Puppets illustrate the importance of regular brushing of the teeth and having periodic dental check-ups.
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74. Poster. Brush Your Teeth, Eat Good Foods, Visit Your Dentist. National Dairy Council. Program Service Dept., 111 N. Canal St., Chicago, Illinois.
77. Poster. Swish and Swallow Poster. American Dental Association. 211 E. Chicago Ave., Chicago, Illinois. Paper – $.25. Laminated – $3.50.
134. Filmstrip. Care of Teeth. 1959. Color with Captions. Herbert M. Elkins Co. 10031 Commerce Avenue, Tujunga, California. 91042. Shows some basic concepts in building health habits.

Plate 19.13

EVALUATION FORM
COMPUTER BASED RESOURCE GUIDE

The continued improvement of computer based resource units depends to a great extent upon your assessment of the print-out you have received. Your response to the following statements should take only a few minutes to complete. Of particular concern are your written responses which are solicited in several of the items.

Title of unit used . . . .

Average age of children in class . . . .

Have you previously used a computer based resource guide YES..... NO.....

The class consisted of predominately typical children. . . . . atypical children. . . . . If atypical, please specify (e.g. trainable M.R., physically handicapped).

. . . .

Please circle the appropriate number.

	Greatly	Moderately	Very Little	Not At All
1. The computer based resource guide aided me in planning instruction for the students I teach	4	3	2	1
2. The use of this computer based resource guide stimulated my thinking regarding new techniques and materials	4	3	2	1
3. To what extent did the use of the computer based resource guide facilitate the individualization of instruction in your classroom	4	3	2	1
4. To what extent did your students react favorably to the use of this computer based resource guide	4	3	2	1

5-10. Indicate for each of the components listed below its usefulness in planning and implementing instructional strategies for your students . . .

	Greatly	Moderately	Very Little	Not At All
A. Objectives	4	3	2	1
B. Content	4	3	2	1
C. Group activities	4	3	2	1
D. Individual activities	4	3	2	1
E. Materials	4	3	2	1
F. Measuring devices	4	3	2	1

11. Do you plan to use computer based resource guides in the future ?
Yes..... No.....

12. The section of the guide most valuable was total group suggestions .... individual suggestions .... neither .... both of equal value ....

13. Indicate the number(s) of any statements you found exceptionally helpful (e g material = 136, activity - 17)

14. Indicate the number(s) of any statements you found to be totally inappropriate or erroneous (Please clarify)

15. What other topics would you like to see in the form of a computer based resource unit.

16. Indicate any additional information which we might find useful in improving computer based resource units and/or elaborate on any of your previous answers. Also indicate any valuable materials, activities, or measuring devices which you utilized which were not in the guide. (Please use the back of this paper.)

If you wish you may sign your name.

Name ....

Address ....

....

....

Date..

Return to

State University College at Buffalo
Research and Development Complex
1300 Elmwood Avenue
Buffalo, New York 14222

Attention: G. Bianchi

Plate 19.14

Unit: Environmental and Public Health

Group Information

Class MA range: 5.0 – 7.0

Group Objectives:

2. To analyze how the senses contribute to awareness of environmental conditions.
4. To identify the potentially hazardous elements in our environment that are consequences of human influence.
9. To analyze the role of the people in the family, school, community, and nation that cooperate to protect the environment.

Student Information: James Wade

CA: 5.0

MA: 5.0

Physical Handicaps: none

Reading Level: Primer – 1.0

Interests: Cars, dogs

Learning Environment: Classroom

Developmental Tasks: Needs help in achieving personal independence

Individual Objectives:

1. To identify the elements within the natural environment that have the potential for being harmful.
2. To describe how man can protect against the various harmful effects of the environment.

Plate 19.15

OBJECTIVES

909 *SPEAKING AND LISTENING* (Grades K-6)

PLEASE NOTE: because of the particular value of this unit, very few or no individual activities will appear in Part B of your print-out.

A. Speaking

32. To identify common misuses of words in speech.
54. To organize ideas in logical sequence.
64. To speak in complete sentences.
65. To answer a specific question in terms related to the subject, under consideration.
68. To participate effectively in group discussions.
78. To observe the contemporary social amenities for example to say, "please", "thank you" and other social courtesies.
83. To criticize courteously and objectively.
102. To acknowledge a favor, show gratitude, or ask permission.
117. To dictate accounts or reports of one's own school experiences.
118. To use descriptive language to tell about an object, an action, or emotion, or sensory impressions of touch or sounds.
121. To express orally items of interest; to talk about real, imaginative, or funny experiences.
141. To clearly enunciate selected words.
163. To use pantomime as a means of expression.
164. To use a combination of words and pantomine as a means of expression.
165. To construct in correct sequence, a story through pictures.
166. To express moods by facial expression.
169. To give verbal commands

B. Listening

2. To attend to a verbal communication for an appropriate length of time.
4. To identify sounds that are within the range of their experience, i.e., a dog's bark, thunder, background sounds on film or record.
5. To differentiate between common "signal" sounds, i.e., fire bell, schedule bell, air raid, car horns.
10. To identify the following characteristics of a sound: volume (intensity – loud or soft) pitch (high or low frequency).

11. To identify a particular consonant sound and consonant combinations at the beginning, middle or end of a word.
12. To identify particular vowel sounds and dipthongs at the beginning, middle or end of a word.
13. To determine the number of syllables in a spoken word.
14. To determine the stressed syllable (primary accent) in a spoken word.
15. To identify similar roots within spoken words, i.e., transport, transportation, import and export.
16. To identify similar affixes (prefixes, suffixes) in a spoken word. i.e., preview, prefix: beautiful, roundness.
18. To determine the difference in meaning between words very similar in sound, i.e., laboratory, lavatory.
20. To follow directions of procedures in school situations. i.e., fire drills, organized games, work activities.
24. To determine the meanings of new words which are heard by using context clues.
27. To identify the theme or major idea in an oral presentation.
29. To describe the mood of a story (poem) i.e., humorous, serious, informative.
33. To accurately outline in writing a lengthy verbal communication.
37. To detect misinformation and faulty concepts used in discussions.
38. To draw conclusions from what is heard.
40. To identify pertinent facts and information, in an oral presentation.
44. To identify the rhyme, rhythm and colorful combinations of selected words.
45. To distinguish fact from opinion in an oral presentation.
47. To summarize what has been heard.
48. To describe the emotion of the speaker as indicated by his pitch, stress, or mannerism of speech.
53. To supply missing words/expressions from familiar rhymes or stories told orally.
74. To retell in correct sequence a story that has been heard.
150. To distinguish between words that are similar such as do-too, fate-fade.

Plate 19.16

OBJECTIVES

067 SAFETY EDUCATION (K-9)

I. Objectives suggested for elementary school students (K-6).

1. To identify unsafe situations and learn to avoid them.
2. To identify common safety hazards in one's home, school, and community.
3. To practice behavioral traits which will enhance the safety of oneself and others.
4. To define the specific roles of the people directly related to the promotion of safety in the school and community.
5. To identify areas of risk to individual and group safety that might occur specifically during holiday time.
6. To identify areas of risk to individual and group safety that might occur during a particular season of the year.
7. To define some hazards of the pedestrian, the bicyclist, the bus passenger, and the automobile passenger.
8. To describe the major responsibilities of being a pedestrian, a bicyclist, and a bus passenger.
9. To demonstrate courtesy with peers.
10. To define a selected number of school safety rules.
11. To contribute toward the development of a safe school environment.
12. To identify the hazards that relate to various daily activities.

II. Objectives suggested for secondary school students (7-9)

13. To describe those environmental, social, and personal factors related to safe living.
14. To identify the relationship between one's activities, attitudes, and accidents.
15. To compare the statistical relationship between age and sex and the number of accidental deaths.
17. To identify those factors which lead to the prevention of accidents.
18. To identify the cost factors related to accidents.
20. To describe unsafe practices that lead to accidents in recreational sports and physical education activities.

Plate 19.17

OBJECTIVES

061 TOBACCO (Grades K-12)

I. Objectives suggested for elementary school students (K-6).

1. To analyze the development of tobacco production and its use in the western culture.
2. To outline how tobacco influences America today.
3. To describe the short-term physical effects of tobacco smoking in the body.
4. To identify safety factors associated with tobacco smoking.
5. To analyze the research data related to tobacco consumption and its effects on health.
6. To analyze the research evidence concerning regular, or long-term use of tobacco.
7. To describe the relationship of tobacco smoking to the individual's ability to participate at an optimal level in physical activities.
8. To explain some of the causal relationships between smoking and disease.
9. To compare the direct relationship between increased usage of tobacco products in the United States with the increase of cardio-respiratory diseases.

II. Objectives suggested for secondary school students (7-12)

11. To evaluate the factors pertaining to the establishment of the smoking habit.
12. To describe the physiological, psychological, sociological, and economical effects of tobacco consumption.
13. To explain the effects of the major chemical components of tobacco smoke.
14. To compare the potential social and psychological values of smoking to the detrimental effects.
15. To compare the attitudes and habits of various groups toward smoking, (i.e. smokers, non-smokers, ex-smokers, medical profession, economic levels, etc.).
16. To describe the effects of tobacco lobbying on legislation.
17. To evaluate the various advertising techniques utilized to encourage smoking and increase tobacco sales.
18. To utilize the findings of research when deciding whether or not to smoke.

III. Objectives appropriate for both groups.

24. To analyze the effects of a "smoking environment" on a non-smoker, smoker, and those with special health problems.
28. To define the technical terms related to the physical problems associated with tobacco consumption.
29. To explain the correlation between death rates and exposure to tobacco products in relationship to the amount smoked, the degree of inhalation, and the age at which smoking began.
30. To explain why cigarette smokers have substantially higher rates of death and disability than their non-smoking counterparts in the population.

Summary

1. Computer Based Resource Units were developed by the State University College of New York at Buffalo to help teach in the classroom by providing individual resource units by means of a computer.
2. Resource units are broad pools of ideas and information which can be adapted by teachers of different grade levels.
3. Teaching units are developed from resource units to prevent fragmentary learning, provide practice, and provide organization for difficult concepts.
4. The C.A.P. Abstract and request form help the teacher select appropriate teaching units.
5. The individual pupil portion of the form allows the teacher to plan for individual differences.
6. The Computer Based Resource Guide contains content, outlines, an activities section, an instructional materials section, and evaluation devices.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV V

Selection and Retrieval of Instructional Procedures & Materials
VI

VII VIII IX X

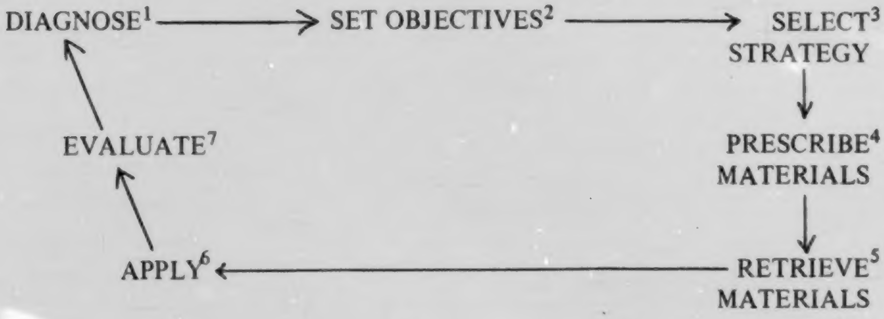
- CHAPTER 18. NATIONAL NETWORK OF INSTRUCTIONAL MATERIALS AND REGIONAL MEDIA CENTERS
- CHAPTER 19. COMPUTER-BASED RESOURCE UNITS (CBRU)
- CHAPTER 20. PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM helps teachers consider student variables when planning in specific skill areas.
  - The process, which is very similar to the Diagnostic Teaching Model, includes diagnosing teaching objectives, selecting strategies, prescribing materials, retrieving materials, providing instruction, and evaluating outcomes.
  - The SELECT-ED Dictionary, which accompanies the kit, is the key to the system.
  - Descriptor card files are used to individualize the materials for the desired task.
- CHAPTER 21. FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM

CHAPTER TWENTY

PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM

The Prescriptive Materials Retrieval System (PMR System) was developed in 1969 by the Select-Ed Company from Olathe, Kansas. The system helps teachers apply pupil variables to specific skill areas in order to facilitate learning.

The retrieval system from Select-Ed is designed so that the teacher can understand how the descriptors he supplies when requesting information are transformed into suggested instructional materials. Below is a diagram of the process which occurs.



Notice in the flowchart that the teacher selects his instructional strategy before he selects his instructional materials. This procedure allows him to determine the activity he will use with the child, then find a material to fit. The flowchart above is, of course, highly similar to the Diagnostic Teaching Model.

The PMR System helps the teacher define a group of materials fitting the precise criteria he specifies. Using the PMR System, he can identify materials which teach a specific content, in a specific form, using a specific reading level and fitting a specific strategy. Although the purpose of the PMR System differs from that of CBRU, many of the principles are the same. For example, in both systems the teacher is required to supply descriptor codes which are then transformed into concrete recommendations. These codes deal with content as well as pupil variables in both systems.

The key to using the PMR System is the SELECT-ED EDUCATIONAL DESCRIPTOR DICTIONARY which accompanies each kit. This dictionary contains over 400 educational terms falling into eight categories. Each category represents a type of variable which may be important in the selection of instructional materials. These help the teacher translate his ideas into descriptor codes. The eight specific content descriptors detail specific skills – concepts or information contained in the materials indexed in the PMR System. Section nine alphabetically arranges the specific content descriptors by major areas.

NOTE: The descriptor card number is always in front of the descriptor.

The second part of the PMR System contains a descriptor card file. Each card in the system corresponds to one descriptor number from the Dictionary. Placement of holes on the card is used to represent materials which embody the card's descriptor characteristics.

The descriptor cards for each descriptor the teacher specifies are placed on a light box. The lighted holes which appear represent the materials which fit *all* of his specified descriptors. The more descriptor cards put on the light box the fewer holes there are going to be. That means fewer materials. At the same time, the more descriptors used, the more confidence the teacher has that the materials are going to fit the task he has described for them.

Possible User Problems with Descriptors

1. By using descriptors from each of the eight categories, it is possible to blot out all holes and not identify any materials. Four different descriptors will usually narrow the list down far enough.
2. The use of two descriptors from the same section may blot out all the holes.
3. Trouble arises if descriptors are taken first from one of the Major Area Sections and then from one of the Specific Content Sections.

Locating Appropriate Materials

1. Find coordinates of each remaining light hole after all the descriptor cards have been placed. Read across, then down.
2. Use the obtained number to look up the material on the Descriptive Analysis Sheets.

The Descriptive Analysis Sheets are housed in a four-volume set of loose-leaf notebooks. The coordinates found refer to specific materials abstracted in these books. The material abstracts generally contain enough information so that the teacher can decide whether or not the material will fit the strategy planned. See Plates 20.1, 20.2, 20.3, 20.4 and 20.5.

Plate 20.1

FORMAT.............Prepared Cards, Kit

DOCUMENT NUMBER 1056

READING LEVEL

SHELF NUMBER__________

COST...............$7.50

DESCRIPTIVE ANALYSIS SHEET

TITLE: Reading Essentials Teaching Aids, Grade One

AUTHOR:

PUBLISHER: Steck Vaughn Company

COPYRIGHT: 1956

NARRATIVE: The publisher states that the Reading Essentials Teaching Aids are visual, flexible materials that provide for additional practice activities which aid in developing necessary reading skills at the first grade levels. The prepared flash cards are designed to present a program of phonetic and structural analysis of words appropriate for first grade level, with emphasis placed on the main essential sounds of letters and letter combinations. Only those phonetic elements that are stable, and that occur frequently in the vocabulary the child is using, are used. The activities covered are family pictures and names, rhyming sounds, auditory initial-consonants, visual auditory initial-consonants, sentence parts, final consonants, and little words in big words. The complete set of Teaching Aids for the first grade consists of eight different individual sets of cards. The publisher states that, with the exception of character names, the words used in these aids are selected from words commonly used in basal series of readers at pre-primer, primer and first reader levels. The sets and individual cards which are numbered in sequence of use, may be used in whatever order the situation demands. The teacher uses the flash cards by holding them up passing them out to pupils, placing the cards on a wall chart or chalk tray, depending on the type of activity. The pupil interacts by verbal responses, observation, listening, and through various games. Immediate feedback by the teacher is used to correct wrong responses. Acceptable performance is determined by the teacher. The large 5 color drawings on separate cards are an integral part of the teaching process. The printing is done in large size heavy black letters. The cards are made of cream colored smooth tag-board. They are packaged in green paper covered cardboard boxes varying in size from 3¼" x 5¼" to 3¼" x 14¾". The entire kit is contained in a green paper covered box about 10 x 15 inches. A separate teacher's manual is included with the kit and contains suggestions for teaching procedures, games and activities.

Plate 20.2

FORMAT .... Tape & Worksheet

DOCUMENT NUMBER 522

READING LEVEL

SHELF NUMBER ____

COST $7.95

DESCRIPTIVE ANALYSIS SHEET

TITLE:	Introduction to the Listening Experience – Wollensak Teaching Tape
AUTHOR:	Deutsche, Sondra
PUBLISHER:	3M Company
COPYRIGHT:	1968

NARRATIVE:

The author states that the objectives of the *Introduction to the Listening Experience* tape and worksheet are to show the child the importance of good listening by making listening fun and to teach the child how to work with a tape and worksheets and to follow directions. The child needs a worksheet and crayons (red, green, yellow, and black). A man's voice directs the child to color in or to draw certain items on the worksheet. The man takes the children on various visits (to a party, to school, etc.) which may be identified by the sounds on the tape. The taped voice is easy to understand. It pauses while the child responds to directions. Teacher involvement would be mainly in the area of checking to see that the children are responding properly to directions. She need give no directions, as the directions are on the tape. The black and white illustrations on the worksheet are an integral part of the teaching process of the tape. The teacher's manual is a separate, 2 page book. The first page contains space for the teacher's notes. The second page contains the title of the tape, the tape author, the editor, the tape and lesson time, objectives,materials needed by students and teacher, a summary of the tape, and the grade level at which the tape would be most suitable. The tape, worksheets and teachers manual are packaged in a 9" x 11½" heavy cardboard box.

Plate 20.3

FORMAT ....Workbook
DOCUMENT NUMBER 1473

READING LEVEL
SHELF NUMBER ________

COST.............

DESCRIPTIVE ANALYSIS SHEET

TITLE: Perceptual Communication Skills – Program 1

AUTHOR: Selma E. Herr

PUBLISHER: Instructional Materials and Equipment Distributors

COPYRIGHT: 1968

NARRATIVE: According to the author, the students' workbooks are designed to train individuals to develop a greater awareness through learning to listen more effectively. Not only are the books designed to develop auditory awareness, but also to help develop concepts and vocabulary. The author attempts to fulfill this aim through exercises involving listening for similarities, classification, learning to use judgement, listening to nursery rhymes, listening for details, drawing conclusions, following directions, listening for sequence, being aware of sounds, etc. Program 1 is stated to be for preschool kindergarten, first, second, and third grades. The workbooks are divided into lessons. The pages of the workbook are numbered and in the upper right-hand corner there is a picture of some object, to aid the non-reader. The student receives basic instructions from the teacher then makes appropriate verbal or written responses in the workbook. The teacher must check student responses.

The teacher is involved in introducing, guiding, and checking the books. A hardback Teacher's Handbook accompanies the workbooks. It provides directions, answers, and supplementary activities for each lesson in the workbook. Tapes to accompany the lessons are available from the publisher.

Plate 20.4

FORMAT...............Programmed Paper DOCUMENT NUMBER 1963

READING LEVEL SHELF NUMBER__________

COST...............

DESCRIPTIVE ANALYSIS SHEET

TITLE: Math Set No. 2 Practice Slate

AUTHOR:

PUBLISHER: Aero Educational Products in Consultation With Charles Edwards

COPYRIGHT: 1965

NARRATIVE: No statement of purpose or general intent for this material is given. One-half of the material deals with mathematical practice of counting, addition, and subtraction. The other half is devoted to the use of +, -, =, >, <, and numerals, as well as to "place value to 99" and "to 999". The "ones" rule in addition, the identity element, the commutative principle, the associative principle and using addition rules.

It is presented in the form of a folder with two different kinds of work aids: (1) 24 self-answering forms with problems on one side and answers on the other, (2) a practice slate with a wooden stylus. The self-answering forms are each devoted to developing one skill and becomes progressively more difficult from first to last card

The student responds to the material by placing a practice form over the practice slate with problems facing up. With the stylus the student answers the problems in the space provided. When the problems are completed, the form can be turned over and again placed over the slate. Correct answers appear adjacent to the answers the student has written so that the student can immediately check his own work. The answers are easily erased from the slate by pulling up the two films attached at the top of the slate. The practice slate is ready for use again. The practice slate "is guaranteed for a year's use or will be replaced by Aero Educational Products without charge."

There is no manual or teacher's guidelines. Explicit instructions are on the inside cover of the packet. In addition, a table of contents states which practice forms are devoted to which math skills. Print size is 24-point type.

Plate 20.5

FORMAT .... Programmed paper DOCUMENT NUMBER 1321

READING LEVEL SHELF NUMBER ____________

COST $3.95

DESCRIPTIVE ANALYSIS SHEET

TITLE:	Self-Teaching Arithmetic, Third Book
AUTHOR:	Studebaker, John W., and Studebaker, Gordon
PUBLISHER:	Scholastic Book Service
COPYRIGHT:	1964
NARRATIVE:	Self-Teaching Arithmetic, Third Book is designed to supplement all basic arithmetic testbooks and courses at second, third or fourth grade level. The book is designed too for self-study, self-test, and self-check. Part I gives related addition and subtraction equations and adding and subtracting with two-digit numerals. Part II extends the learnings of addition to column addition, adding by endings or bridging, renaming, regrouping, and carrying ones, tens, and hundreds, adding dollars and cents, and adding four-digit numerals. Part III gives work in subtraction including subtracting with zeros and by endings, three-digit and four-digit minuends, borrowing from tnes and hundreds, working with zeros, and subtracting dollars and cents. The last five pages are a general review. The books contain pairs of pages. One page in each pair is the Practice Page. It contains facts with windows below them. The answers for the facts show through the windows. On the Study Pages facing the Practice Pages are illustrations that will help the child visualize the basic arithmetic facts. The child studies the Practice Page until he thinks he knows all of the facts. Then he slides a piece of paper or Magic Slate under the page to hide the answers. He writes the answers through the windows directly below the facts. When he has finished writing the answers he puts the answer sheet under the next page. The correct answers and his answers show through the windows. He checks to see where his mistakes are. He repeats this process until he correctly answers all of the facts on the page and then goes on to the next Practice Page. This series of books requires a minimal amount of teacher direction. After explanation of how to use the books the student can work independently. Accompanying each book is a Magic Slate for writing the answers. The illustrations are small colorful objects in sets or pictures accompanying word problems. The book has a hardback cover and is spiral bound. They are 8" x 12¼" and contain light cardboard pages. There is a teacher's guide which is a separate book and gives directions for all of the books in the series.

TITLES WITHIN SERIES: Self-Teaching Arithmetic, Books 1-4

Availability

Right now there are about 7,500 different pieces of material indexed in the system so the teacher won't always have the suggested material at his fingertips. Typically from 55-65 percent of the materials indexed in the PMR System will be found in any well-equipped school district. If the school does not have the material available immediately, it may be necessary to borrow the material from an Associate IMC.

System Advantages

The primary function of the PMR System is prescriptive. Materials can be identified to fit the pupil needs.

Since new materials are being produced all the time, the PMR System is kept current by making periodic up-dates of its components. Revisions are made to the PMR System based upon the recommendations of teachers.

Summary

Currently the PMR System is being used quite widely. In fact, it is now used in 41 states and 7 of the 13 Regional Instructional Materials Centers. This chapter has been concerned with presenting information about the PMR System, and should not be considered an endorsement.

Any detailed questions a teacher may have about the PMR System can be answered by writing to:

SELECT – ED Inc.
117 N. Chester
Olathe, Kansas 66061

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

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Selection and Retrieval of Instructional Procedures & Materials
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VII VIII IX X

CHAPTER 18. NATIONAL NETWORK OF INSTRUCTIONAL MATERIALS AND REGIONAL MEDIA CENTERS

CHAPTER 19. COMPUTER-BASED RESOURCE UNIT

CHAPTER 20. PRESCRIPTIVE MATERIALS RETRIEVAL SYSTEM

CHAPTER 21. FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM helps teachers diagnose children's specific learning problems and identify materials for teaching specific skills rather than broad concepts.

The system contains behavioral objectives for 277 different reading skills for grades 1-6.

In kit form, the components of the system include a teacher's manual, a series of tests on cassette tape, a series of self-scoring work sheets, a Pupil Progress Profile, and a Teaching Alternatives Supplement.

CHAPTER TWENTY-ONE

FOUNTAIN VALLEY TEACHER SUPPORT SYSTEM

The Fountain Valley Teacher Support System (FVTSS) helps teachers to diagnose children's specific learning problems and identify materials for teaching specific academic skills rather than broad concepts. The system was started in response to a need by the teachers in the Fountain Valley School System in California for a quick and precise way to determine whether their pupils had mastered reading skills presented in previous work. For those pupils who had not mastered specific reading skills, the teachers wanted suggestions as to materials which teach the deficient skills.

Working with the teachers and pupils in 16 schools, researchers developed behavioral objectives for 277 different skills presented in reading instruction in grades 1-6. These objectives along with simple tests for each objective and suggested materials for teaching each objective form the basis for the Fountain Valley Teacher Support System

Components of the System

The FVTSS comes in kit form. The kits are color coded for the various grade levels. Level 1 is red, Level 2 is orange, Level 3 is yellow, etc. Each kit contains a teacher's manual, a series of tests on cassette tape, a series of self-scoring work sheets, a Pupil Progress Profile, and a Teaching Alternatives Supplement.

Teacher's Manual The first four sections of the teacher's manual contain an introduction to the system. This introduction is helpful in understanding the make-up, rationale and function of the system.

Section 5 of the Teacher's Manual contains the most important information – behavioral objectives for each of the reading skills appropriate for the grade level. For example: For each reading skill appropriate for 1st grade children, Section 5 contains a behavioral objective for determining whether the pupil has mastered that skill. (See page 15–51 in the *FVTSS Teacher's Manual*)

Each skill that is taught at each grade level has been categorized according to one of the following types:

1. Word analysis
    a. Phonetic analysis
    b. Structural analysis
2. Vocabulary development
3. Comprehension
4. Study skills

Section 5 of the Teacher's Manual follows this categorization. First, all objectives dealing with phonetic analysis are covered, then those dealing with structural analysis and so on. The type of objectives covered on any one page is given at the top right hand corner of the page.

In addition to Section 5 being divided by the type of skills or objectives covered on each page, each type of skill is also subdivided into parts. Each part corresponds to a specific test which checks the mastery of all skills in that part.

Another feature of the Teacher's Manual is that each objective has its own number within each category. The number identifies the grade level of the skill and also indicates the relationship of the skill to other skills.

Pupil Progress Profile. The Pupil Progress Profile is divided into the same categories as the objectives in Section 5 of the Teacher's Manual. (See page 521 in Manual.)

The Profile presents a short-hand version of the content of each skill in the Teacher's Manual. By using the profile, teachers may identify a skill and then use the Teacher's Manual to determine how the skill will be tested. The number in front of each skill on the Profile corresponds with the objective covering that skill in the Teacher's Manual.

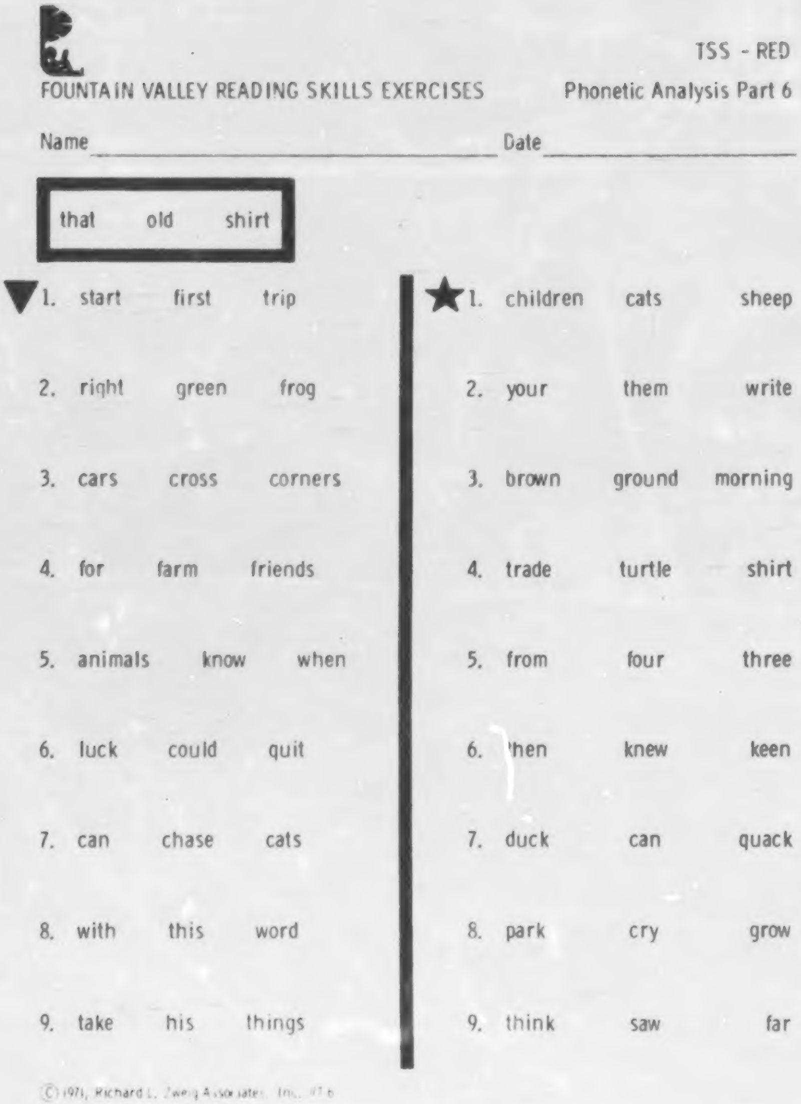
Tests on Cassette Tapes. The tests are used to check mastery of the reading skills. All instructions to the pupil are included in the tape, as are all of the questions to which the child must respond. Thus, the main duty of the teacher is to select the proper cassette and provide a cassette recorder. The label on the cassette contains the section title and part number corresponding to those skills it tests.

Self Scoring Work Sheets. Pupils use test answer sheets to respond to the cassette test questions. Each form contains one sample item at the top of the form. In addition, each form is self scoring. (See sample test in Plate 21.1).

Teaching Alternatives Supplement. This supplement allows the teacher to identify specific materials which may be used to reteach skills which are found to be deficient. An example of a child's responses to one of the tests is in Plate 21.2.

Advantages of the System

The FVTSS can help the teacher in two ways. First, it can help him keep a record of what skills were mastered and when the reteaching of deficient skills began. Second, it can help him identify appropriate instructional materials for the reteaching process.



TSS - RED

FOUNTAIN VALLEY READING SKILLS EXERCISES

Phonetic Analysis Part 6

Name ______________________ Date ______________

that old shirt

▼ 1. start first trip

2. right green frog

3. cars cross corners

4. for farm friends

5. animals know when

6. luck could quit

7. can chase cats

8. with this word

9. take his things

★ 1. children cats sheep

2. your them write

3. brown ground morning

4. trade turtle shirt

5. from four three

6. then knew keen

7. duck can quack

8. park cry grow

9. think saw far

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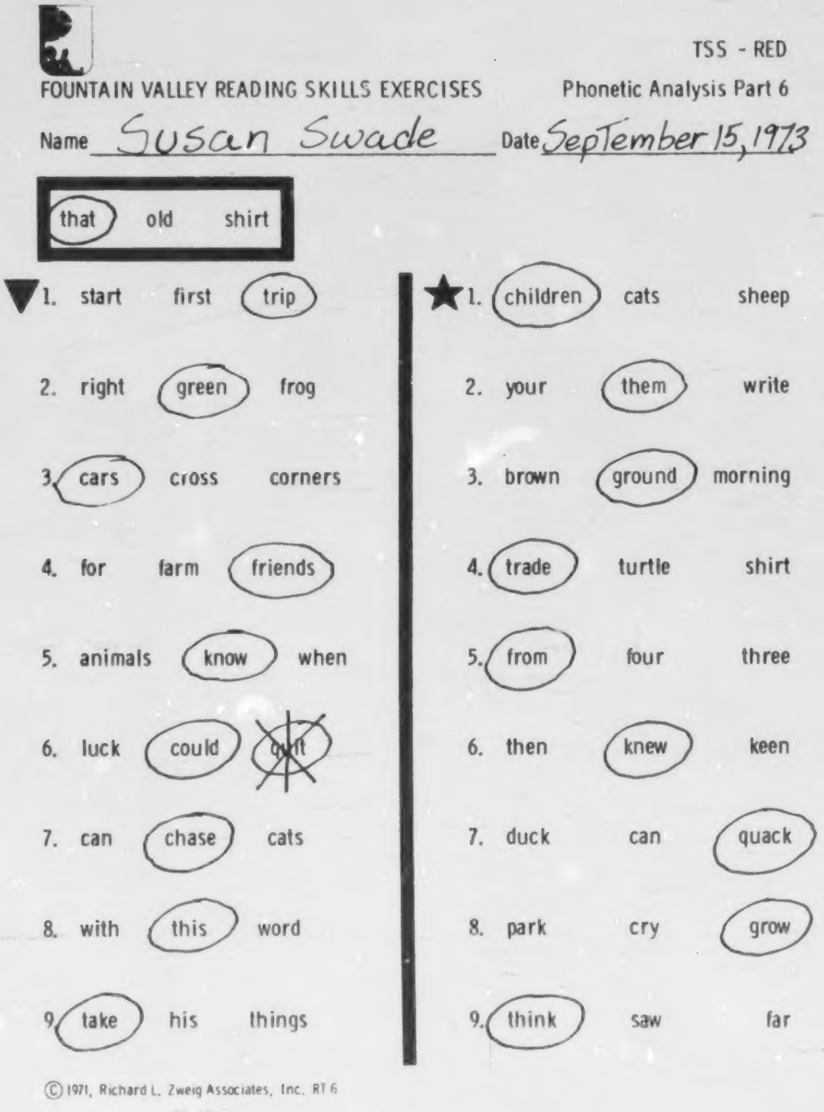
Plate 21.1 SELF SCORING WORKSHEET

The student will demonstrate proficiency in WORD ANALYSIS/PHONETIC ANALYSIS by recognizing initial blends and digraphs tr (1-45), gr (1-46), cr (1-47), fr (1-48), ch (1-50), kn (1-51), th (voiced) (1-52), th (unvoiced) (1-53) and phonetic part qu (1-49).

SCORING INSTRUCTIONS	At Each Skill Level
Proceed	-0
Reteach	-1
# of Items	(2)

1.	1-50h	1-50	+	1.	+	1-45	1-45a
2.	1-52	+	1-52	2.	1-46a	+	1-49
3.	1-46	+	1-46	3.	1-47a	+	1-47a
4.	1-45a	1-45a	+	4.	+	1-48a	1-48a
5.	1-48d	1-48a	+	5.	1-51	+	1-51
6.	1-51	+	1-51	6.	+	1-49	1-49
7.	+	1-49	1-49	7.	1-50	+	1-50
8.	1-47	+	1-47a	8.	1-52	+	1-52a
9.	1-53d	1-53i	+	9.	+	1-53	1-53



TSS - RED

FOUNTAIN VALLEY READING SKILLS EXERCISES

Phonetic Analysis Part 6

Name Susan Swade Date September 15, 1973

[✓ that] old shirt

▼1. start first [✓ trip]

2. right [✓ green] frog

3. [✓ cars] cross corners

4. for farm [✓ friends]

5. animals [✓ know] when

6. luck [✓ could] ~~quit~~

7. can [✓ chase] cats

8. with [✓ this] word

9. [✓ take] his things

★1. [✓ children] cats sheep

2. your [✓ them] write

3. brown [✓ ground] morning

4. [✓ trade] turtle shirt

5. [✓ from] four three

6. then [✓ knew] keen

7. duck can [✓ quack]

8. park cry [✓ grow]

9. [✓ think] saw far

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Plate 21.2 SUSAN SWADE'S SELF SCORING WORKSHEET

The student will demonstrate proficiency in WORD ANALYSIS/PHONETIC ANALYSIS by recognizing initial blends and digraphs tr (1-45), gr (1-46), cr (1-47), fr (1-48), ch (1-50), kn (1-51), th (voiced) (1-52), th (unvoiced) (1-53) and phonetic part qu (1-49).

SCORING INSTRUCTIONS	At Each Skill Level
Proceed	-0
Reteach	-1
# of Items	(2)

1. 1-50h 1-50 [✓ +]
2. 1-52 [✓ +] 1-52
3. 1-46 [✓ +] 1-46
4. 1-45a 1-45a [✓ +]
5. 1-48d 1-48a [✓ +]
6. 1-51 [✓ +] 1-51
7. [✓ +] 1-49 1-49
8. [✓ 1-47] + 1-47a
9. 1-53d 1-53i [✓ +]

1. [✓ +] 1-45 1-45a
2. 1-46a [✓ +] 1-46
3. 1-47a + [✓ 1-47a]
4. [✓ +] 1-48a 1-48a
5. 1-51 [✓ +] 1-51
6. [illegible] [✓ 1-49] 1-49
7. 1-50 [✓ +] 1-50
8. 1-52 [✓ +] 1-52a
9. + 1-53 [✓ 1-53]

The FVTSS can also help the teacher identify instructional materials to help reteach deficient skills. The component of the system which allows him to identify appropriate materials is the Teaching Alternatives Supplement.

Using the System

The purpose of the FVTSS is to help teachers diagnose reading problems and identify instructional materials to be used in reteaching deficient skills. If two or more pupils are deficient in the same skills, these common deficiencies could form the basis for group work on the remediation of the skills.

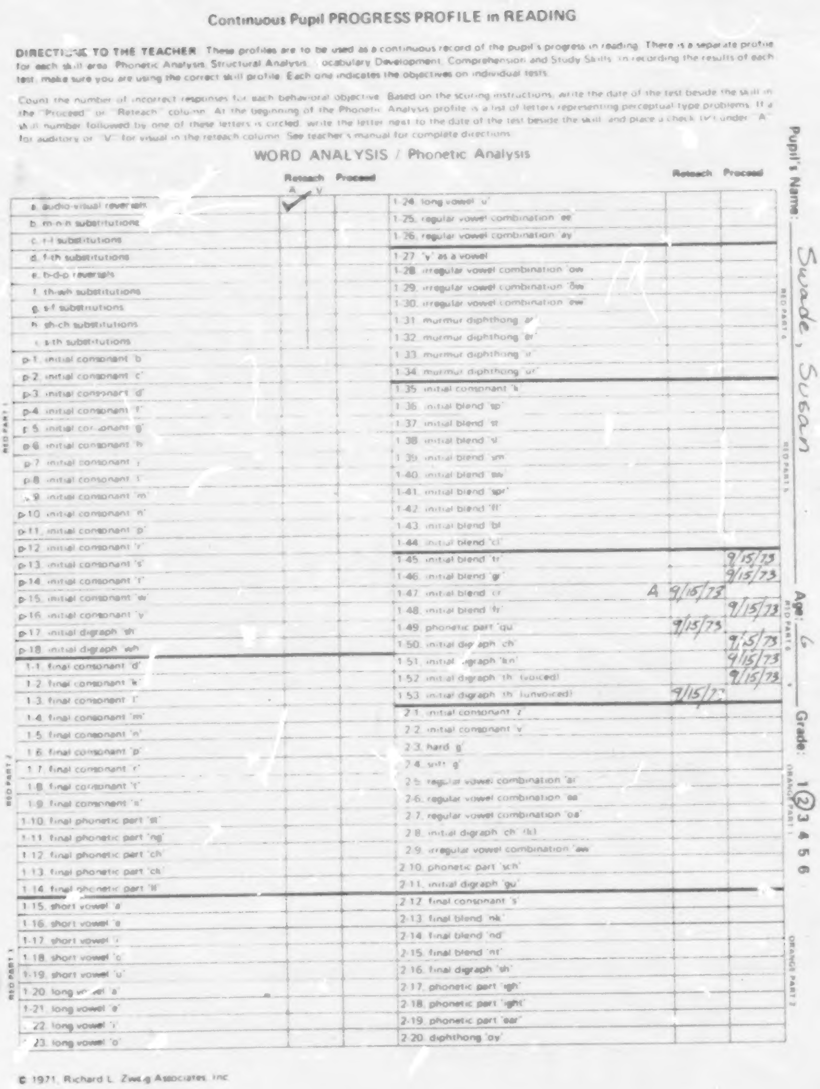
In most classes, especially those using individualized reading approaches, there are some pupils who read far better than average and those who read far worse than average. In other words, there may be a great range of reading abilities within a class. The teacher may have to have FVTSS kits at more than one level if he is to adequately meet the reading needs of his pupils.

To use the system, the teacher first tests one or more children by means of the cassettes and self scoring tests. The cassette tape administration helps standardize the testing situation. Children listen to the taped directions and respond to questions by marking the test forms. The teacher then examines the back of the self-scoring test form to see which items (objectives) a given child missed. The items are keyed to objectives in the Teacher's Manual and in the Teaching Alternatives Supplement (TAS). Thus the teacher can easily find out which specific skills the child needs practice on and by means of the TAS can find the exact page in various reading series on which that particular skill's taught.

Future Plans

Currently under construction is a FVTSS in arithmetic. Questions about either the reading or arithmetic system should be directed to:

Richard L. Zweig Associates, Inc.
20800 Beach Boulevard
Huntington Beach, California 92648



Continuous Pupil PROGRESS PROFILE in READING

DIRECTIONS TO THE TEACHER These profiles are to be used as a continuous record of the pupil's progress in reading. There is a separate profile for each skill area: Phonetic Analysis, Structural Analysis, Vocabulary Development, Comprehension and Study Skills. In recording the results of each test, make sure you are using the correct skill profile. Each one indicates the objectives on individual tests.

Count the number of incorrect responses for each behavioral objective. Based on the scoring instructions, write the date of the test beside the skill in the "Proceed" or "Reteach" column. At the beginning of the Phonetic Analysis profile is a list of letters representing perceptual type problems. If a skill number followed by one of these letters is circled, write the letter next to the date of the test beside the skill and place a check (✓) under "A" for auditory or "V" for visual in the reteach column. See teacher's manual for complete directions.

WORD ANALYSIS / Phonetic Analysis

Pupil's Name: Swade, Susan Age: 6 Grade: 1 [✓ 2] 3 4 5 6

		Reteach		Proceed
		A	V	
	a. audio-visual reversals	✓		
	b. m-n-h substitutions			
	c. r-l substitutions			
	d. f-th substitutions			
	e. b-d-p reversals			
	f. th-wh substitutions			
	g. s-f substitutions			
	h. sh-ch substitutions			
	i. s-th substitutions			
RED PART 1	p-1. initial consonant 'b'			
	p-2. initial consonant 'c'			
	p-3. initial consonant 'd'			
	p-4. initial consonant 'f'			
	p-5. initial consonant 'g'			
	p-6. initial consonant 'h'			
	p-7. initial consonant 'j'			
	p-8. initial consonant 'l'			
	p-9. initial consonant 'm'			
	p-10. initial consonant 'n'			
	p-11. initial consonant 'p'			
	p-12. initial consonant 'r'			
	p-13. initial consonant 's'			
	p-14. initial consonant 't'			
	p-15. initial consonant 'w'			
	p-16. initial consonant 'y'			
	p-17. initial digraph 'sh'			
	p-18. initial digraph 'wh'			
RED PART 2	1-1. final consonant 'd'			
	1-2. final consonant 'k'			
	1-3. final consonant 'l'			
	1-4. final consonant 'm'			
	1-5. final consonant 'n'			
	1-6. final consonant 'p'			
	1-7. final consonant 'r'			
	1-8. final consonant 't'			
	1-9. final consonant 'x'			
	1-10. final phonetic part 'st'			
	1-11. final phonetic part 'ng'			
	1-12. final phonetic part 'ch'			
	1-13. final phonetic part 'ck'			
	1-14. final phonetic part 'll'			
RED PART 3	1-15. short vowel 'a'			
	1-16. short vowel 'e'			
	1-17. short vowel 'i'			
	1-18. short vowel 'o'			
	1-19. short vowel 'u'			
	1-20. long vowel 'a'			
	1-21. long vowel 'e'			
	1-22. long vowel 'i'			
	1-23. long vowel 'o'			

		Reteach	Proceed
	1-24. long vowel 'u'		
	1-25. regular vowel combination 'ee'		
	1-26. regular vowel combination 'ay'		
RED PART 4	1-27. 'y' as a vowel		
	1-28. irregular vowel combination 'ow'		
	1-29. irregular vowel combination 'ou'		
	1-30. irregular vowel combination 'ew'		
	1-31. murmur diphthong 'ar'		
	1-32. murmur diphthong 'er'		
	1-33. murmur diphthong 'ir'		
	1-34. murmur diphthong 'ur'		
RED PART 5	1-35. initial consonant 'k'		
	1-36. initial blend 'sp'		
	1-37. initial blend 'st'		
	1-38. initial blend 'sl'		
	1-39. initial blend 'sm'		
	1-40. initial blend 'sw'		
	1-41. initial blend 'spr'		
	1-42. initial blend 'fl'		
	1-43. initial blend 'bl'		
	1-44. initial blend 'cl'		
RED PART 6	1-45. initial blend 'tr'		9/15/73
	1-46. initial blend 'gr'		9/15/73
	1-47. initial blend 'cr'	A 9/15/73	
	1-48. initial blend 'fr'		9/15/73
	1-49. phonetic part 'qu'	9/15/73	
	1-50. initial digraph 'ch'		9/15/73
	1-51. initial digraph 'kn'		9/15/73
	1-52. initial digraph 'th' (voiced)		9/15/73
	1-53. initial digraph 'th' (unvoiced)	9/15/73	
ORANGE PART 1	2-1. initial consonant 'z'		
	2-2. initial consonant 'v'		
	2-3. hard 'g'		
	2-4. soft 'g'		
	2-5. regular vowel combination 'ai'		
	2-6. regular vowel combination 'ea'		
	2-7. regular vowel combination 'oa'		
	2-8. initial digraph 'ch' (k)		
	2-9. irregular vowel combination 'aw'		
	2-10. phonetic part 'sch'		
	2-11. initial digraph 'gu'		
ORANGE PART 2	2-12. final consonant 's'		
	2-13. final blend 'nk'		
	2-14. final blend 'nd'		
	2-15. final blend 'nt'		
	2-16. final digraph 'sh'		
	2-17. phonetic part 'igh'		
	2-18. phonetic part 'ight'		
	2-19. phonetic part 'ear'		
	2-20. diphthong 'oy'		

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Plate 21.3 PUPIL PROGRESS PROFILE

Summary

1. The Fountain Valley program helps teachers diagnose children's specific learning problems and identify materials for teaching specific skills.
2. The system contains behavioral objectives for 277 different reading skills for grades 1 – 6.
3. In kit form, the components of the Fountain Valley system include a teacher's manual, a series of tests on cassette tape, a series of self-scoring work sheets, a Pupil Progress Profile, and a Teaching Alternatives Supplement

PART VII

APPLICATION OF THE DIAGNOSTIC TEACHING MODEL

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV V VI

Application
of the
Diagnostic
Teaching
Model
VII

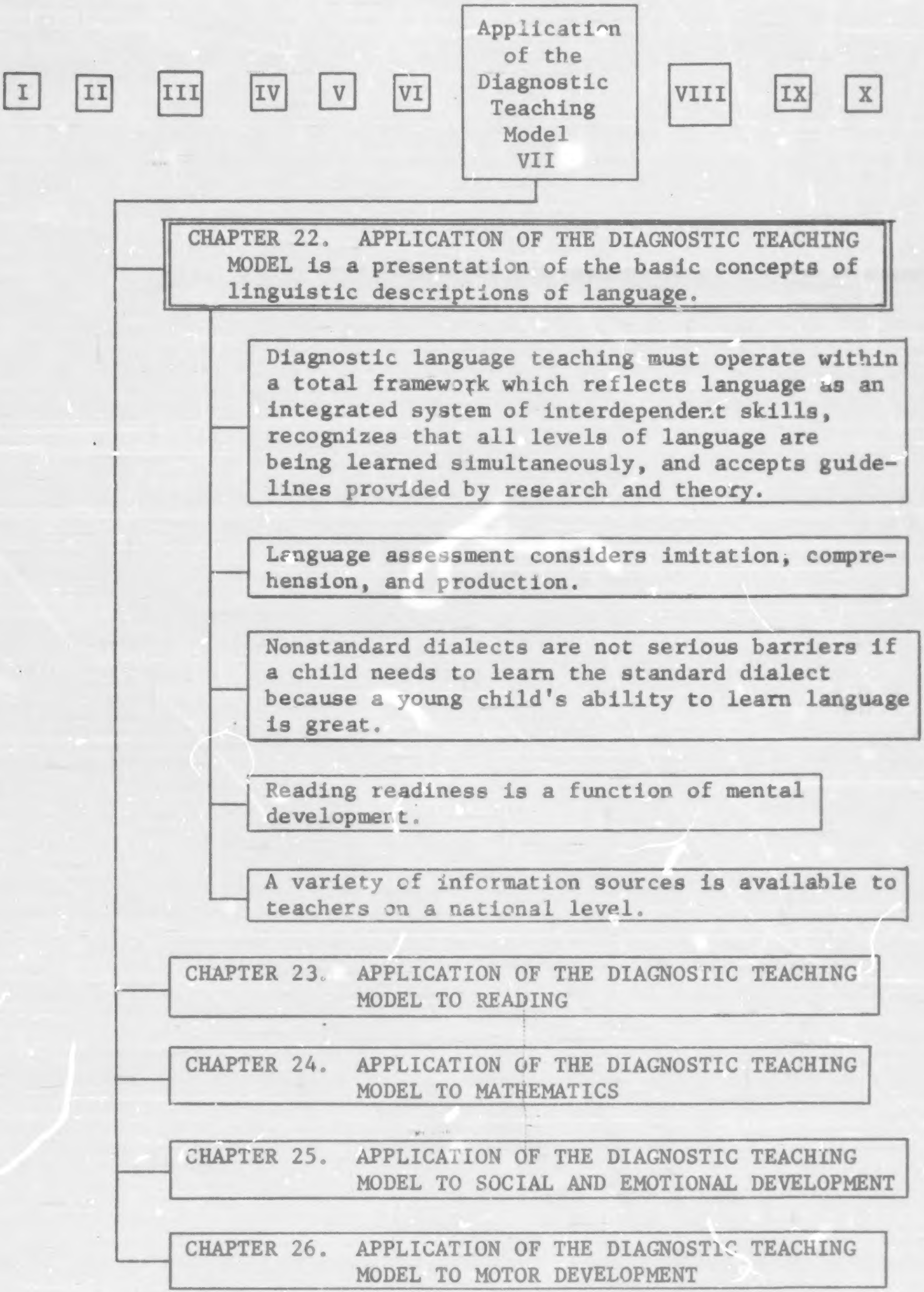
VIII IX X

- CHAPTER 22. LANGUAGE DEVELOPMENT
- CHAPTER 23. READING
- CHAPTER 24. MATHEMATICS
- CHAPTER 25. SOCIAL-EMOTIONAL DEVELOPMENT
- CHAPTER 26. MOTOR DEVELOPMENT

PREFACE TO CHAPTERS TWENTY-TWO, TWENTY-THREE, TWENTY-FOUR, TWENTY-FIVE, AND TWENTY-SIX

Up to this point, this course has dealt with developmental learning of children at a rather general level; that is, the information has not been presented in terms of specific learning areas. Part VII is devoted to helping the teacher apply the Diagnostic Teaching Model to specific areas: Language Development, Reading, Mathematics, Social and Emotional Development, and Motor Development.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN



CHAPTER 22. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL is a presentation of the basic concepts of linguistic descriptions of language.

Diagnostic language teaching must operate within a total framework which reflects language as an integrated system of interdependent skills, recognizes that all levels of language are being learned simultaneously, and accepts guidelines provided by research and theory.

Language assessment considers imitation, comprehension, and production.

Nonstandard dialects are not serious barriers if a child needs to learn the standard dialect because a young child's ability to learn language is great.

Reading readiness is a function of mental development.

A variety of information sources is available to teachers on a national level.

CHAPTER 23. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO READING

CHAPTER 24. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MATHEMATICS

CHAPTER 25. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO SOCIAL AND EMOTIONAL DEVELOPMENT

CHAPTER 26. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MOTOR DEVELOPMENT

CHAPTER TWENTY TWO

LANGUAGE DEVELOPMENT

This chapter acquaints teachers with basic concepts of linguistic descriptions of language. Such knowledge should increase the effectiveness of teachers in recognizing and describing accurately the problems of children who show signs of delay or deviation in language learning. Only important ideas are presented which have immediate relevance to language assessment and remedial planning.

Diagnostic language teaching, though it aims at amelioration of specific defects or enhancement of specific abilities, must operate within a total framework. It must reflect awareness that:

1. Language is not merely a collection of certain skills but, rather, an integrated system in which these skills are interdependent.
2. In the crucial, preschool years, language learning goes on at all levels of language simultaneously.
3. Research and theory can provide guidelines concerning factors which seem to be important in children's normal language learning.

The discipline of linguistics describes different languages and how, in general, language seems to work. It considers language as having different levels – phonology, morphology, syntax and semantics.

1. The *phonological level* deals with the *speech sounds* and how they are produced. Linguists use the concept of phoneme to designate the smallest sound unit in language which affects meaning, though it is of itself meaningless. It affects meaning in the sense that native speakers observe a difference if that unit or phoneme is changed or taken away (ex. when *c*at is changed to *h*at or *at*). The actual speech sounds, since they are strung along as segments in time, are called segmental phonemes. Those features of the intonation given to sounds, syllables and phrases and which affect meaning (ex. when stress is shifted in "contest – contest") are the supra-segmental phonemes. To assess phonological competence it is necessary to check a child's mastery of age-appropriate segmental phonemes and his understanding and use of intonation.

Intonation is the aspect of the sound system that the child normally acquires first. The child has learned the vowel sounds by the time he is using one or two-word sentences; mastery of the consonant sounds may take him fully five or six more years. Plate 22.1 is a chart of symbols often used to describe all the English speech sounds. Plates 22.2 and 22.3 indicate the average age at which different English consonant sounds are normally learned and the sequence of development of speech blends.

Plate 22.1

CHART OF PHONETIC SYMBOLS

CONSONANT SOUNDS

/b/	baby	/n/	none	/hw/	whether
/d/	dad	/ŋ/	ring	/θ/	thin
/f/	five	/p/	pen	/ð/	then
/g/	go	/r/	red	/ʃ/	show
/h/	hand	/s/	see	/ʒ/	azure
/j/	yes	/t/	top	/t /	church
/k/	car	/v/	van	/d /	judge
/l/	lamb	/w/	wagon		
/m/	man	/z/	zone		

VOWEL SOUNDS

/i/	feet	/ɑ/	father	/ɝ/	fur
/ɪ/	sit	/ɔ/	ball	/ə/	about
/ɛ/	bed	/o/	hotel	/ʌ/	butter
/æ/	hat	/ʊ/	foot	/ɜ́/	murder (alsoɜr)[1]
/a/	ask	/u/	moon	/ə́/	murder (also ər)[1]

DIPHTHONGS

/eɩ/	day	/ɪə/	sheer	/ɑʊ/	cow
/ɑɪ/	tie	/ɛə/	bear	/oʊ/	tow
/ɔɪ/	boy	/oə/	bore	/ɪʊ/	cute[1]
		/ʊə/	tour	/jʊ/	you[1]

---

[1] The symbols / r/, / u/, and /ju/ are used in accented syllables or one-syllable words; the symbols / r/ and /j / are used in unaccented syllables.

Plate 22.2

SEQUENCE AND NORMAL AGE OF MASTERY OF SPEECH SOUNDS

By age 3	/b/, /m/ and /n/, /f/, and /w/ and /h/
By age 4	/p/, /d/, /g/ and /k/ and /j/ and /l/
By age 5	/t/, /v/, /s/, /z/, /ʃ/, and /ʒ/
By age 5 1/2	/tʃ/, /r/
By age 6	/dʒ/
By age 6+	/θ/ and /ɣ/

All the vowel sounds are normally developed by age 2

From:
MENYUK, P. *The Acquisition and Development of Language*, Englewood Cliffs, N. J. Prentice-Hall, Inc. 1971

Plate 22.3

SPEECH BLENDS DEVELOPMENT CHART

A rough developmental sequence appears to exist for acquisition of consonant-sound blends as well as for acquisition of individual sounds, although the former shows much more variability than the latter. Shine and Freilinger suggest the order of development of speech blends as given below. In this list sounds are rendered in traditional orthography, and the authors include the phonemes /tʃ/ as in *church* and /dʒ/ as in *judge* among the sound blends.

1. mp (dump)
2. nk (bank)
3. kw (quick)
4. ch (church)
5. ps (lips)
6. dr (dress)
7. gr (green)
8. j (judge)
9. gl (glad)
10. dw (dwell)
11. ks (books)
12. bl (blue)
13. tr (tree)
14. nd (land)
15. nt (aunt)
16. fl (fly)
17. pl (play)
18. nz (runs)
19. sp (spade)
20. kl (clean)
21. st (star)
22. kr (cry)
23. ngz (sings)
24. mz (homes)
25. ts (lets)
26. fr (frog)
27. br (broke)
28. lz (nails)
29. sm (small)
30. sw (sweet)
31. lv (twelve)
32. sk (skate)
33. str (street)
34. skw (square)
35. ngg (finger)
36. ns (fence)
37. sn (snake)
38. dz (birds)
39. spr (spring)
40. gz (rugs)
41. pr (pray)
42. lf (wolf)
43. sl (sleep)
44. lt (belt)
45. skr (scream)
46. spl (splash)
47. thr (three)
48. ld (cold)
49. lk (silk)
50. tl (bottle)

From:

SHINE, R. E. and J. J. FREILINGER. *Practical Methods of Speech Correction for the Classroom Teacher.* (Davenport, Iowa: Teaching Aid, Company), 1962.

2. The *morphological level* refers to the smallest combination of sounds that has meaning (morpheme), and the way words are composed of morphemes (morphology). All words are either single morphemes, in which case they are root words (book), or morpheme combinations, in which case they are compound words (bookworm), or derived words (bookish), or inflected words (booked). The last two cases make use of derivational morphemes – (the prefixes and suffixes which give new meanings to the words they become attached to and thus are a major source of vocabulary), and inflectional morphemes (grammatical word endings like the plural, possessive case, adjective comparison, or verb agreement). In assessment of morphological competencies, inflectional morphemes especially are checked. At preschool age, awareness of derivational morphemes as distinct word elements is not developed to any great extent, except perhaps for a few common ones like *un*button, *un*dress, teach*er*, farm*er*, etc.

3. The *syntactical level* of language deals with the way words are grouped into meaningful sentences which other people will be able to understand and which they can accept as "correct" (sounds grammatical to others). This level has five major components.

Awareness of major word classes. The awareness of major word classes helps the child string words together correctly so that he will say "these trees," but not "these climbs." There are two major word classes – form (content) words and function words. Form words describe objects or events in the environment, or the qualities of them. They carry the primary meaning in the sentence and the child uses them almost exclusively in the early development of his communicative career. Function words are little words which connect the form words and mainly play a grammatical role. They give sentences "frames."

An increase in the use of function words and a decrease in percent of content words is an indicator of a child's linguistic growth. Between ages 2 and 4, the shift is normally about 25%; in adults function words make up 60% of all speech and 40% of their writing.

Knowledge of basic sentence types. Knowing the basic sentence types means the child is aware of the simple declarative sentences, without any elaboration, which employ transitive verbs (I wash the windows; I give you the sponge), intransitive verbs (John works; Lisa sits nicely) or linking verbs (John looks happy; Troy is a darling).

Knowledge of basic grammatical relationships. When he knows basic grammatical relationships, the child is aware of the subject-object and other word-order distinctions which regulate which words can co-occur and which cannot (e.g. it is correct to say "the long road," "the dirt road," and "the road is very long," but not "the road is very dirt."

Ability to substitute. When a child can substitute, he has realized that words or phrases which occur in the same sentence position may replace each other.

Knowledge of transformations. A child understands transformations when he knows the word order and other changes that must be made in order to produce either variants of a single basic sentence (John hit Mary. Why was Mary hit by John?) or a compound or complex sentence involving conjoining or subordinating more than one simple sentence (John hit Mary. Mary hit John back. John hit Mary and Mary hit him back).

The basic, simple sentence patterns and simple transformations (negation, commands, questions) and much of the morphological system are acquired by most children before school age. However, full morphological development takes until about age 8. Many more complex grammatical forms (for example, clausal connectives like "if," "and," "because," auxillary verbs, and the passive form) are not used to any great extent by preschool-age children, and full meaning of these may take quite a few years longer.

It is also important to remember that from the first emergence of any new structure, for example the plural marker or the negative form, quite some time will elapse before the child can use it consistently and correctly in all appropriate situations.

At all levels of language, a rule being learned is applied first in familiar contexts and with regular items, and in unfamiliar contexts or with irregular words only after a lot of practice. Plates 22.4 and 22.5 are charts which show linguistic researchers' observations on early stages in sentence development and word-class differentiation, and a summary containing observations and a rough time table for normal emergence of basic grammar structures.

4. The *semantic level* of language refers to the meaning of statements, and semantic ability is ability to interpret this meaning. Semantic range of concepts includes personal experiences, "mental idea" toward those experiences, and whatever brings that idea to mind. *Attributes* are the things which are included in the meanings of a concept and *critical attributes* are those meanings which are shared by people, and which form the basis for successful communication. Full interpretation involves both linguistic and nonlinguistic skills (such as understanding gestures, evaluating the speaker's background and the situation – these are sometimes called communicative skills). The child needs to develop both, but the mainly linguistic components of semantic competence are these:

Plate 22.4

SOME SUMMARY FEATURES OF DEVELOPMENT OF THE SYNTACTIC SYSTEM

Emerging Process or Structure	Approximate Age in Months
When the child produces single words, these are sentence-like in meaning because he applies different intonation contours. Also, the words he chooses represent the *topic* of the situation he finds himself in; e.g. he may say "light out" and point to the bulb but "on" as he points to and wants to turn the switch.	12-20
When he uses two- or three-word utterances, the words already form categories, and their combination is systematic. The categories are not yet like adult form classes – they have, in the main, semantic delimitation – but the *behavior* is the same. Two-word utterances have intonational contours of declarative, imperative, question, and negative sentence types.	28-33
Sentences take the subject + predicate form (e.g. "big boat" becomes "that a big boat"; "eat cake" becomes "John eat cake").	28-36
The predicate expands to verb + object ("don't touch me"); verb + adverb ("put it here"); verb + prepositional phrase ("put it on table").	28-36
The subject becomes expanded into a *noun phrase* through addition of modifiers like articles, quantifiers, possessive nouns and pronouns, or adjectives (e.g. "Daddy new coat"; "some more milk").	30-36
The noun phrase becomes a moveable structure – it is used in both subject and predicate position.	30-40

SOME SUMMARY FEATURES OF DEVELOPMENT OF THE SYNTACTIC SYSTEMS (Cont.)

Emerging Process or Structure	Approximate Age in Months
Negative form ("I not here"), interrogative ("Is he coming?"), *wh-* questions ("How he do that?") appear.	30-40
Past tense appears ("I broke my car"; "it's broked").	33-45
Plural marker appears ("See those kittens?").	33-45
Progressive (*-ing*) form appears ("turning round"; "I going drop it").	33-40
Forms of *to be* appear, first in verb role ("what is that?", "that's a truck"), later as auxiliary ("we are working hard").	35-42
Verb agreement appears ("I don't see him"; "he doesn't know").	35-45
Possessive marker appears ("mommy's bag"; "those are mine").	35-45
Verb complement appears ("I want to play").	35-45
Some auxiliaries appear ("I did see him"; "we can do this"; "I won't play").	36-45
Relative clause appears ("I don't know what is missing").	55+
Reflexive ("washed himself"); passive ("got spanked"; "was sent home"); adjective comparison ("the biggest of all").	60+
Auxiliary *have* ("I have been thinking"), various conjunctions ("if," "so," "because"); nominalization ("she does the shopping"); participle complement ("I like playing").	60-72+

Plate 22.5

STAGES IN THE DEVELOPMENT OF DECLARATIVE, NEGATIVE, QUESTION, AND IMPERATIVE SENTENCES

	A Early	B In Between	C Later
Declarative	That box Big boat Rick go	That's box That big boat Rick going	That's a box That's a big boat Rick is going
Negative	No play No a book No fall down	I no play That not book (a)I not falling down (b)I'm not fall down	I won't play That's not a book I'm not falling down
Question	See shoe? Truck here? Where baby?	Mommy see shoe? Truck's here? (a)Where baby is? (b)Where's baby is?	Do you see the shoe? Is the truck here? Where's the baby?
Imperative	Want baby!		I want the baby or Give me the baby!
	No touch! Have it!		Don't touch it! Give it to me!

From:
MENYUK, P. *The Acquisition and Development of Language*, Englewood Cliffs, N. J., Prentice-Hall, Inc.), 1971.

Adequate vocabulary. An adequate vocabulary which allows him to express himself about things and events in his familiar environment.

Definitional ability. Definitional ability is not fully developed until adolescence. In children, researchers report roughly this progression: identifying statement, description of prominent perceptual characteristics, statement of use or function, synonym, superordinate concept, word-history information. Children of preschool age rarely progress beyond description of features or function. Definitional ability also includes knowing more than one definition which, again, is not usually achieved at preschool age.

Paraphrasing. The ability to paraphrase allows the child to restate something heard or read in his own words while preserving the meaning.

Evaluating truth value. The ability to evaluate the truth value of sentences requires essentially the entire range of linguistic skills, but it hinges crucially on at least knowledge of the words in the sentence and understanding of the particular sentence pattern.

Detecting ambiguities and absurdities. The ability to detect ambiguities and absurdities allows the child to become aware of incongruity in such expressions as "dainty elephants" or "how good meat tastes." It requires a knowledge of different lexical possibilities for the word involved, ability to derive its meaning from the sentence context, and ability to derive its meaning from the larger context.

In preschool years, linguistic semantic growth does not extend far beyond acquisition of vocabulary. This is quite rapid: at 2 1/2, children use six times the number of words they used at 2, and at 3 1/2, three times the number they used at 2 1/2. From about age 3, expressive vocabulary normally increases by 1,000 items a year.

By far the major part of the semantic system, the expression of relationships among words and the "anchoring" of words in a whole conglomeration of meanings, is built after the preschool years and is intimately related to the child's total intellectual development. Definitional ability at the preschool level is still restricted, in the main, to descriptions of objects' perceptual characteristics and, to some extent, their use.

Assessing Children's Language Growth

As a FIRST step, a general, impressionistic assessment should be made to see:

1. What level of verbal functioning a child is at (words only, phrases, simple, compound or complex sentences

2. Whether his receptive language command is adequate.
3. Whether the quantity of his verbal output is comparable to other children's
4. Whether he is intelligible relative to his age and amount of speaking.
5. Whether his expressive vocabulary is adequate.

If on any of these there are serious doubts, one of the appropriate standardized tests described later in the chapter should be administered.

For a check on the initial impression or on a particular grammatical item, a NEXT helpful step would be to tape record some of the child's speech and analyze the recording.

Finally, the informal procedures demonstrated in the course (Plate 22.6) should be used to:

1. confirm the impressions;
2. check periodically on particular elements or structures which a child may not seem to, but should, acquire; and
3. evaluate the success of remedial activities which might have been used.

The informal language evaluation techniques which were demonstrated in the course can be summarized as providing situations in which the child has to:

Identify sounds in minimal word pairs;
Identify pictures which test sentence comprehension;
Repeat sentences which contain different grammatical structures;
Manipulate objects to demonstrate comprehension of statements containing different grammatical constructions;
Add a correct inflection to real or nonsense words;
Complete sentences to match the structure of a model sentence;
Transform sentences to match the structure of a model sentence.

Verbal competence manifests itself in three ways: imitation according to (imitating those structures which the child already has in his grammar), comprehension, and production (spontaneous, initiative or responsive, talking). Language assessment should tap these performance modes.

Teaching Children From Nonstandard Speaking Backgrounds

A teacher may have children in his class who consistently use "What the name of them animals?", "We all is here," "Jim didn't have no breakfuss," and similar expressions, and who thereby violate conventions of the kind of

Plate 22.6

INFORMAL GUIDELINE FOR ASSESSING LANGUAGE GROWTH

Phonology

1. Speech sounds
2. Sound blends

Morphology

3. Verb agreement – Mom goes; we go
4. Plural marker
   a. noun – dog = dogs; box = boxes
   b. auxiliary – is = are; was = were
5. Past tense marker – he looks = he looked; she stops = she stopped; we dance = we danced.
6. Future tense marker – he looks = he will look; she stops = she will stop; we dance = we will dance.
7. Comparison marker – nice, nic*er*, nic*est*. He is nice. She is nic*er* than he. Their brother is the nic*est* of all.
   clean, clean*er*, clean*est*. The house is clean. The school is clean*er* than the house. Hospitals are the clean*est* buildings.
   more, most. The chair is expensive. The sofa is *more* expensive. The living room suite is *most* expensive.
8. Derivational morpheme – dress, dresser, dressy; name, rename, nameless.
9. Possessive marker – The flower belongs to Joan. It is Joan*'s* flower.

Syntax

10. Subject-object relationships:
    Active – Harry *bought* the ball. Passive – The ball *was bought* by Harry.
    Active – Eloise *won* the free trip. Passive – The free trip *was won* by Eloise.
    Active – The boy pushes the girl. The girl pushes the boy. Passive – The boy is pushed by the girl.
11. Simple sentence – The cat chases the dog. Larry eats. Max is strong.
12. Question transformation – Barb sees the cat. Did Barb see the cat? John is running. Is John running?
13. Negation – I will go. I will *not* go. They are riding bicycles. They are *not* riding bicycles.
14. Indirect-direct
    D.O. I.O. D.O.
    objects – The boy threw the *ball*. The boy threw *me* the *ball*. The student
    D.O. I.O. D.O.
    read the *story*. The student read the *class* the *story*.
15. Reflexive –
    She baked the cake for *herself*. I shouldn't always think of *myself*.

Syntax

16. Word classes:
    - a Preposition — *to* the store; *at* the door; *beyond* the dock.
    - b. Adjective — the dog = the *black* dog; the flower = the *pretty* flower.
    - c. Pronoun — John is tall = *He* is tall. Ann walked home = *She* walked home.
17. Complex transformation
    - a. Relative clause — *After the man saw the car speed by,* he called the police. The tree, *which has lost most of its leaves,* is dying.
    - b. Connectives — *If* I go, you will go. The answer is correct *because* she says it is. You may leave *when* you finish your homework. *Either* you eat your dinner, *or* you'll get no desert.

Semantics

18. Semantic range of concept — The word "cat" can mean a domestic cat, a lion or a certain type of person.
19. Definitional ability — The word "cat" may mean "Max," a four-legged furry animal, a friend, or an enemy.
20. Paraphrase — The ball had a circumfrance of twelve inches. = The ball was about twelve inches around
21. Truth value of statements — The elephant is bigger than the mouse. Since it is summer, I am wearing my winter coat. (Though grammatically correct, the child realizes the information is false.)
22. Ambiguities and absurdities — The man *said* he could *not speak*. The *cat barked* at the dog. The cow *jumped* over the *moon*. (As in 21, though the sentences are grammatically correct their content is absurd.)

language taught in school. If such deviations are systematic, the children probably speak some dialect. All languages are really collections of dialects which differ in certain ways from their respective "standard" language but which are sufficiently similar in their sound systems, grammar, and lexicon so that the dialect speakers can usually converse without any difficulty.

Nonstandard dialects are not a serious communication barrier, especially for young children. However, from a social point of view, one dialect, usually the "standard," may be more appropriate in certain circumstances than in others.

It is not a realistic goal to "get rid of" the child's own speech habits and "substitute" others, since the child spends more time outside of school than in. Children retain great language learning capacity until almost their teens. To work with a preschool child with a nonstandard dialect, accept that dialect and emphasize:

1. Reasoning ability (what would happen if . . .)
2. Concept development
3. Vocabulary development

The teacher of children from a nonstandard speaking background should remember that:

1. A child's language learning capacity is regarded as normal if he comes to school with a command of his native speech at a level appropriate to his age.
2. Because of young children's basic ability to learn any language or languages, a preschool child will acquire the standard dialect if he has enough contact with good models of it.
3. While he is acquiring the standard dialect, the normal lag between comprehension and production will occur in the child's learning.
4. The differences between standard and nonstandard English are usually not so great as to impair communication significantly.
5. Standard English is not superior to nonstandard, but from a social point of view, is often more appropriate.
6. The child from a disadvantaged background may need help to make better use of his verbal ability, especially in regard to precise descriptive language.

Reading Readiness

Reading readiness is generally considered a function of mental development, and should be preceded by competence in oral language skills. A child must reach a certain level of development in both receptive and expressive language before he can be considered for reading instruction. When observing a child to determine his reading readiness, physical, intellectual, linguistic, social, and emotional developments should be considered by the teacher.

Essential language command implies:

1. The child has reached at least the simple sentence level.
2. His sentences are well-formed.
3. He has reasonable verbal fluency and intelligibility.

This development is highly individual and does not occur at a fixed age for all.

Oral language development and eye-hand coordination are maturational factors whose lack suggests that reading should be postponed. Thus, the teacher should be sure to check vision and hearing.

Many readiness elements do respond to training and practice. Among these are:

1. visual and muscular coordination,
2. visual discrimination and comprehension of visual material,
3. auditory discrimination,
4. visual and auditory memory,
5. interest in reading and
6. social-emotional factors.

Remedial Objectives and Activities

An appropriate remedial strategy for a particular need can be developed with a set of observations on a child and possibly scores on some tests.

Criteria for referral are not clearcut and always must be considered together with such things as individual differences in children, the verbal environment in their homes, and, of course, evidence of any kind of sensory or physical impairment.

A better basis for judgment exists if a child has been in the class over a period of time so the teacher has been able to observe his progress rather than just his current performance. General guidelines are:

1. The most urgent problem requiring the speech clinician's attention is shown by the child who does not associate things with their auditory symbol, and who might readily respond to "straw" or "table" at snack time, but be unable to comprehend if asked for the one or if requested to sit at the other, outside of the snacktime context. Sometimes such a problem is overlooked because the children can be good observers and function reasonably well within a group by imitating others. This impairment may be based on a hearing loss.

2. If at the end of the preschool period, a child still uses words or two-word phrases like "Gregory block" or "juice there," he is also likely to need professional help, regardless of whether he has been in the preschool program for some time or is just coming into it.
3. Unintelligibility of speech may be serious if it results from lack of vowel sounds. Even if a child speaks in two-word phrases only, he should have no trouble producing the vowels.
4. With consonant sounds, as a rule of thumb, if a child is 1 1/2 to 2 years behind the normal developmental schedule, he should be referred, and he should also be referred if he has voice problems.

The main objective for a 5 year old is for him to acquire enough words and sentence patterns to express himself in simple sentences. If a child is approaching achievement of this goal, but is having trouble with a few sounds, the following steps should be taken:

1. Help him hear the sound.
2. Give him the sound in a word, then the sound alone.
3. Have him attempt the sound.
4. If he produced the sound correctly, put it in a word, then in a sentence.
5. If he didn't pronounce it correctly, imitate what he said, then repeat it correctly.
6. If he can discriminate the sound, keep practicing. Imitate and correct if he makes an error.
7. At all levels, BE SURE TO PRAISE HIM WHEN HE DOES WELL.

If a child has not been able to *abstract* basic sentence patterns on his own, the teacher should restrict the flow of teacher talk for awhile in such a way that patterns he wants the child to learn come to stand out in his speech. The teacher should repeat the patterns often enough to give the child a good chance to pick them up and use them himself.

Three sentence patterns are 1) identifying, 2) giving spatial relationships, and 3) describing. When teaching a pattern:

1. carefully decide on the pattern and its wording
2. stick to the same wording
3. consistently use the same wording, do not change the pattern until the child has mastered it

The ideal way for preschool children to learn words is for them to experience the words in situations which demonstrate their meaning.

The preschool teacher should always keep in mind that for preschoolers, the best time for language development activities is ALL THE TIME; that is, teachers should give their classroom activities a strong verbal orientation. Classroom environment should permit and *encourage* talking. If a child demonstrates *specific* language disabilities, the teacher should first isolate kinds. (articulation problem, severe semantic limitations, problems of recognizing and using grammatical forms and basic sentence patterns), and then engage the child in simple activities which highlight and practice the competency he lacks.

Some Information Sources

For the teacher who wants to familiarize himself more thoroughly with the language related teaching approaches of different preschool and primary curricula, three recent books or articles may serve as an overview: Parker's *Preschool in Action*, Stanley's *Preschool Programs for the Disadvantaged*, and John & Moskovitz' "Preschool intervention programs with a language focus," in *Linguistics in School Programs*. Glassman's "Directory of resources on early childhood education" lists and describes centers, organizations, educational laboratories, and major publications which focus on preschool education, including programs on language development for the disadvantaged and for exceptional children. The Educational Resources Information Center (ERIC) is a nation-wide network of information clearinghouses to serve all professions in the educational field. Several clearinghouses focus on areas of language-related research and teaching:

ERIC Clearinghouse on the Disadvantaged
Teachers College
Columbia University
New York, New York

ERIC Clearinghouse on Early Childhood Education
University of Illinois
Urbana, Illinois

ERIC Clearinghouse for Exceptional Children
Council for Exceptional Children
Arlington, Virginia

ERIC Clearinghouse for Languages and Linguistics
Modern Language Association
New York, New York

These clearinghouses collect, process and disseminate information of recent educational research. They answer inquiries addressed to them, provide comprehensive summaries and analysis by specialists on many pertinent questions, and often have newsletters and other publications and services. Writing directly to the relevant clearinghouse may be the easiest way for a teacher to obtain ERIC services.

If the teacher has access to a good library and is ready to do some research and reading on his own, several library resources may be very helpful. In ERIC's monthly publication, *Research in Education* (RIE), all the documents processed by all clearinghouses are listed and described. In *RIE*, boldface descriptive terms or headings like, "Language Programs," "Preschool Language Projects," "Preschool Curriculum," "Language Arts," etc., indicate what to look for, and the contents of all relevant documents are then described following such a heading. Full documents can be obtained from ERIC, or the library may have or obtain microfilm copies. Most of the educational research which ERIC's *RIE* announces and describes is published in papers and technical reports. A similar service by the University of Michigan, *Language and Language Behavior Abstracts* (LLBA), mainly describes research which is published in journals and books and which is specifically devoted to language. "Native child language acquisitions," "Special education for the language and speech handicapped," "Native language instruction," and "Speech and language disorders" are among the headings in *LLBA* which might be of particular interest to a research-oriented teacher. A directory, the *Information Sources in Hearing, Speech, and Communication Disorders,* by the Johns Hopkins Medical Institutions, describes societies and associations, research centers and their programs, funding agencies, and training programs concerned with communication disorders. Finally, from the Office of Information of the Center for Applied Linguistics, 1611 N. Kent Street, Arlington, Virginia, a teacher may obtain valuable information and suggestions on such questions as language programs, language descriptions and problems of disadvantaged speech, and language teaching materials and methodologies.

Plate 22.7

SOME ILLUSTRATIONS OF LEVEL I OBJECTIVES

This is a box.
It's a box.
I put the ball on the wagon.
There's the yellow box.

Can I wash my hands? I'm all done.
This isn't a box.
It is not a box.

I want the box.

We'll go to the gym today.
Now, we all run.
We jumped up and down.

Watch how I crawl. I do it this way.
Watch how John crawls. He does it this way.

John picked up all his toys.
John gets two points.

Hold the guinea pig on your lap like this.
Then, you may feed him.

Plate 22.8

SOME ILLUSTRATIONS OF LEVEL II OBJECTIVES

There's the box which has the broken lid.
I put the ball on the wagon with only one hand.
It's a big box.

Can I wash my hands when I'm all done?

I want the box with the elephant picture on it.

We'll have to go to the gym today.
I didn't go to the gym yesterday.
We might go home early.

Watch me crawl. I do it this way.
Watch John crawl. He does it this way.

John gets two points because he picked up all his toys.

If you hold the guinea pig on your lap like this you may feed him.

Plate 22.9

SPEECH TRAINING AND CORRECTION WITH PRESCHOOL AND EARLY GRADE AGE CHILDREN: SOME SUGGESTIONS FOR THE CLASSROOM TEACHER

General

1. Recognize your unconscious teaching. Children are good imitators, and you are an influential "speech teacher" to them at this age.
2. Evaluate your own speech and voice. Tape record your speech and listen to it and, if necessary, make definite plans to improve it.
3. Your voice should be clear and strong but not overly loud.
4. Children like to be read to. Set a good example in articulation, inflection, phrasing, etc. when you read to the class.
5. Keep speech fun and exciting and capitalize on the fact that at this age, children like to talk.
6. Make sure that your classroom encourages speaking and listening. It should be cheerful and colorful and have pictures which invite speech — but avoid confusion.
7. Have activities which force children to listen well and pay close attention — for example, whispering or voiceless mouthing of names of objects or titles of familiar stories.
8. Provide experiences in volume variation. Work in groups but vary distances between speaker and listener.
9. Use such group speech activities as choral speaking, nursery rhymes, and singing to improve volume, phrasing, rhythm, and pitch.

Diagnosis

10. Know how to recognize and work with hard of hearing children. Early detection of hearing problems is vital to their progress in language and education. All problems pertaining to hearing should be referred to the hearing clinician.
11. If a child shows even a great deal of nonfluent speech at this age, ignore it. Don't call him a stutterer or give words to "help" him. Don't have him start over, stop, or slow down. Maintain eye contact with him and have the child do the same.
12. Learn how to identify speech disorders.
13. Refer children if they haven't developed all the vowel sounds or are having voice problems.
14. Know the age ranges within which consonant sounds are normally mastered, and when to refer a child or work with him on consonant sounds.

Remediation

15. Do not react emotionally to a child's speech disorder. Do not make him self-conscious.
16. Be patient and understanding. Do not push a child too far.
17. In matters of discipline, conduct, presentation, and requirements, what is good for the "normal" speaking child is good for the speech handicapped.
18. Encourage oral participation. Don't penalize a speech handicapped child.
19. Avoid speed drills, tongue twisters, and nonsense syllables. Speech activities must be meaningful.
20. Don't use lip, jaw, tongue, voice, blowing, relaxing, or breathing exercises solely for speech.
21. Make a plan to work systematically on speech over a period of time.
22. Use gross sound discrimination activities. Gross discrimination involves recognizing the difference between sounds which are very dissimilar, as /m/ and /k/, for example. Do not practice fine discriminations between similar sounds such as /f/ and /θ/.
23. Don't correct every speech error, even on sounds the child should have developed.
24. Work on one sound at a time.
25. Good posture is essential for good speech.
26. Praise the child as soon as speech improvement becomes even noticeable, but don't leave the impression he's good only when his speech is correct.

Based on

SHINE, R. E. and J. J. Freilinger. *Practical Methods of Speech Correction for the Classroom Teacher.* (Davenport, Iowa: Teaching Aids Company), 1962.

Plate 22 10

SOME COMMENTS ON RESPONSE MODES

Verbal ability is manifested in three ways – through imitation, comprehension, and through production (or expression)

Imitation

A child's imitative ability is often used as a measure of his language development Several reasons make imitation convenient for assessment. For one thing, young children usually like to imitate, and they can easily understand in such a situation what they are supposed to do Another advantage is that one can test them on many different types of constructions within a short time, since switching the type of problem (construction measured) doesn't require a whole new set of instructions and procedures And children can usually imitate structures before they can use them spontaneously, and often before they fully comprehend them A Sentence Imitation Test which elicits many early, as well as later constructions is shown on Plate 22 11 A teacher may want to adopt its specific vocabulary to his own classroom situation and a child's experimental background

The child may not perfectly reproduce the model sentence given him. That model may have embodied constructions which he hasn't learned yet, or it may be so long that he can't remember most of it But his imitation will even then not be "just what he can remember " He will, rather, rephrase the sentence according to the grammatical rules he is using and the structures he has already acquired

Much can be learned from the kinds of omissions a child makes in sentence imitation Imitation also follows a developmental pattern – the older a child is, the better he can imitate, but even a very young one imitates systematically Suppose a child is asked to repeat. "We can't go out right now because it's raining " If he can't yet repeat the whole statement, he is more likely to rephrase it as "Can't go now, raining," than as "we out it right" or repeating part of the statement – "we can't go out" or "it's raining" and dropping the rest One researcher asked children *deliberately* to repeat sentences which contained some grammatical deviation, for example, "We have child's in this school" or "he's washing hisself " At age 3 ½, many more children in their imitation changed such sentences to a grammatically correct form than at age 5 ½ The researcher observes that, as children grow older, their task orientation increases, that is, they are better able to follow instructions and overcome a strong tendency to change such sentences to accord with the rules of "their" grammar

Children's sentence imitations normally contain those words which have the loudest stress in the model sentence. These are usually the nouns, verbs, and adjectives – the words which have the highest information load – rather than other parts of speech. And also, the words retained are usually those toward the end of the model sentence rather than those at the beginning.

Comprehension

Comprehension is the response mode that is often referred to as "receptive language." For assessment it is the most important of the response modes One could not respond appropriately to any statement unless he had the ability to figure out its meaning – which is to comprehend it. A child's ability to follow directions is based on comprehension. So is the ability, in adult conversation, to project ahead of time what someone is going to say. Often, when a person is searching for a word, the listener can supply it for him, and may even subconsciously know what someone is going to say when he had barely started a sentence. These things are related to comprehension.

In order to comprehend a statement, the *words* of which it is made up and their *lexical meaning* must be known and interpreted in the particular *context* in which they occur. But the manner in which the words are put together – that is, the particular *syntactic pattern* they make, must be considered. If a secretary says, "I find myself getting thinner and thinner" she means something quite different by "thinner" than if she announces "I finally found the perfect thinner." The meaning difference is determined by the syntax of the two statements.

This ability to put together all the semantic, grammatical and, of course, phonological information which is contained in a statement, interpret it and react to it, is acquired and reflects a knowledge of language or, as linguists call it, a linguistic competence.

Production

Production is the response mode which is often referred to as "expressive language." It refers simply to the fact that speech is constantly "produced", either completely spontaneously, in response to questions, or by prompting as when the teacher tries to elicit a specific verbal response from a child. The productive mode is the most difficult and the last to be mastered. As is well known, children understand and imitate statements with particular words or grammatical constructions long before they can use these in their own speech.

Plate 22.11

SENTENCE IMITATION TEST

Transformation Type:	Sentence:
Passive	She got hit by a car.
Negative	They aren't my toys.
Question	Is that a firetruck?
Contraction	We'll go to the zoo tomorrow.
Inversion	Now I am older
Relative question	What are you doing?
Imperative	Go to bed
Pronominalization	There are some in the attic.
Separation	He put them on the chair
Got	He's got the measles.
Auxiliary *be*	I am really going home.
Auxiliary *have*	They have never been here.
Do	I did wash the dishes.
Possessive	He's playing with his brother's truck.
Reflexive	She hurt herself.
Conjunction	The dog is big and the cat is small.
Conjunction deletion	I saw a boy and a girl
Conjunction *if*	You can have it if you want it.
Conjunction *so*	I was tired so I went to bed.
Conjunction *because*	He knows how to read because he goes to school.
Pronoun in conjunction	Daddy came home and he brought me a present.
Adjective	I have a red bicycle
Relative clause	I don't know what to say
Complement	I want to sing
Iteration	You have to go to school to learn how to read.
Nominalization	I do the singing and she does the talking.
Nominal compound	The garbage truck has gone.

SLOBIN, D. I., et al., *Field Manual for Cross-Cultural Study of the Acquisition of Communicative Competence*, 1967; pg. 194.

Plate 22.12

THE TEMPLIN-DARLEY TESTS OF ARTICULATION

Two tests are published together in a spiral-bound book: a SCREENING TEST which the TEACHER can use for a preliminary but comprehensive speech-sound examination, and a DIAGNOSTIC TEST which the SPEECH THERAPIST may use.

The first section of the book describes the procedures for giving and scoring the tests. The teacher should read these very carefully before administering the Screening Test.

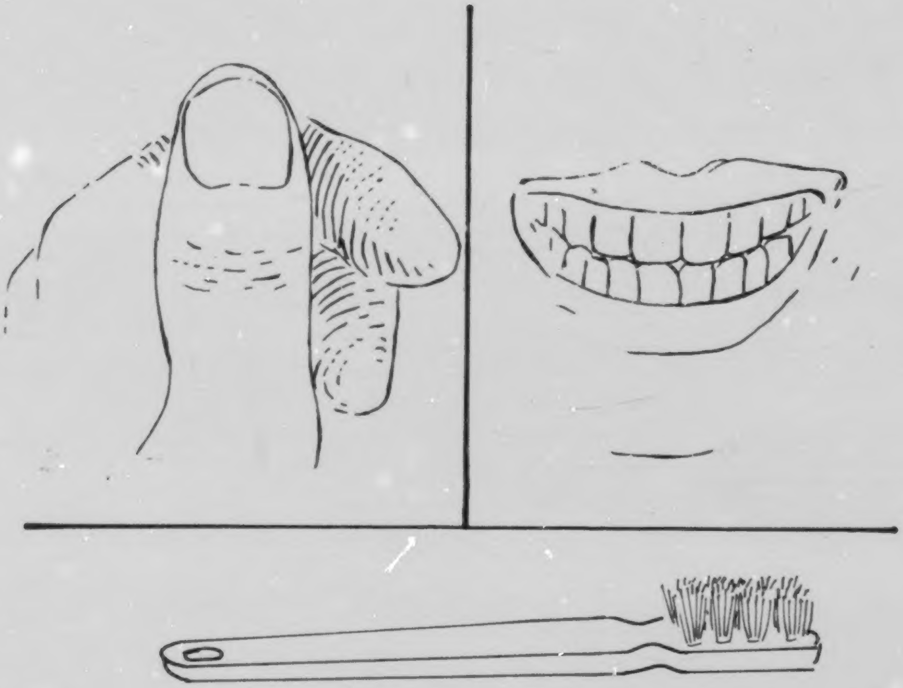
This section is followed by stiff paper cards which are the test material. One card shows either two, three, or four pictures on one side, and on the other side it indicates which sound is being tested and gives the test word in a sentence.

The teacher may either say the whole sentence and have the child *imitate* or she can try to *elicit* the test word from the child. The manual suggests that for *preschool* children, imitation may be the more appropriate method.

The *first 50 pictures* of the test material *make up the Screening Test.* To score the Screening Test, the teacher determines how many test words the child articulated correctly. The manual provides a table of cut-off scores for eight age levels (from 3 to 8 years). If the child obtains fewer correct than the cut-off score, the manual suggests that he should be referred to the speech therapist for a full diagnosis.

A reproduction of one of the picture cards is shown in Plate 22.13. The test words and test sentences are given at the bottom of the picture. In the book, these are on the reverse side, so that the teacher can easily hold up the picture card to the child and read the sentences off the back.

TEMPLIN, M. C. and F. L. DARLEY. *The Templin-Darley Tests of Articulation: A Manual and Discussion of Articulation Testing,* (2nd ed., Iowa City, Iowa. University of Iowa), 1969.



7	/θ/	(i)	thumb	This finger is called a ......
8	/θ/	(m)	toothbrush	This is a
9	/θ/	(f)	teeth	We use it to brush our ......

Plate 22.13

PICTURE CARD FROM THE TEMPLIN-DARLEY TESTS OF ARTICULATION

Plate 22.14

NORTHWESTERN SYNTAX SCREENING TEST

This test, as its name implies, is used as a screening test by the speech clinician. Teachers may use it as well to get an estimate of children's grammatical development – it does not measure articulation or semantic ability. It is applicable for ages 3 to 8.

The following plates are:

Record Form with sentence pairs (Plate 22.15);
A picture item from the receptive portion (item 15) (Plate 22.16);
A picture item from the expressive portion (item 19) (Plate 22.17); and
A chart for the expressive portion with percentile norms for the 3 to 8 age ranges (Plate 22.18). There is a separate chart for the receptive portion.

As the Record Form indicates, the test measures separately children's receptive (comprehension) and expressive (imitation and production) command of important morphological and syntactic competencies. The teacher shows and names the pictures without, of course, giving clues for the *test* pictures (for example, by emphasizing the sentences which refer to these). In the comprehension part of the test, the child points to the picture which the sentence describes; in the expressive part he says the descriptive sentence for the picture the teacher points to. For example, on picture item 15 (receptive), he should point to (b) and (c); on item 19 (expressive), he should say "The boy is pulled by the girl" when the teacher points to (a) and asks "What's this picture?"

The teacher adds up the child's total correct scores for each section of the test and uses the expressive and receptive charts to see how well the child is doing relative to other children of his age. If, for example, a 4 ½ year old child taking the expressive section of the test had been able to name only 14 pictures, he would just reach the 10th percentile. If he had named 26 of the 40 pictures, he would fall between the 50th and the 75th percentiles.

The test author, Dr. Laura Lee, suggests that, if a child scores below the 10th percentile, he needs further study by the speech clinician, and remedial language training.

LEE, L. *Northwestern Syntax Screening Test.* (Evanston, Illinois: Northwestern University), 1969.

Plate 22.15

NORTHWESTERN SYNTAX SCREENING TEST
RECORD FORM

Name ____________ Sex ______ Date ____________ B.D. ________ C.A. _____

Receptive Score ________ Percentile ________ Expressive Score __________ Percentile ________

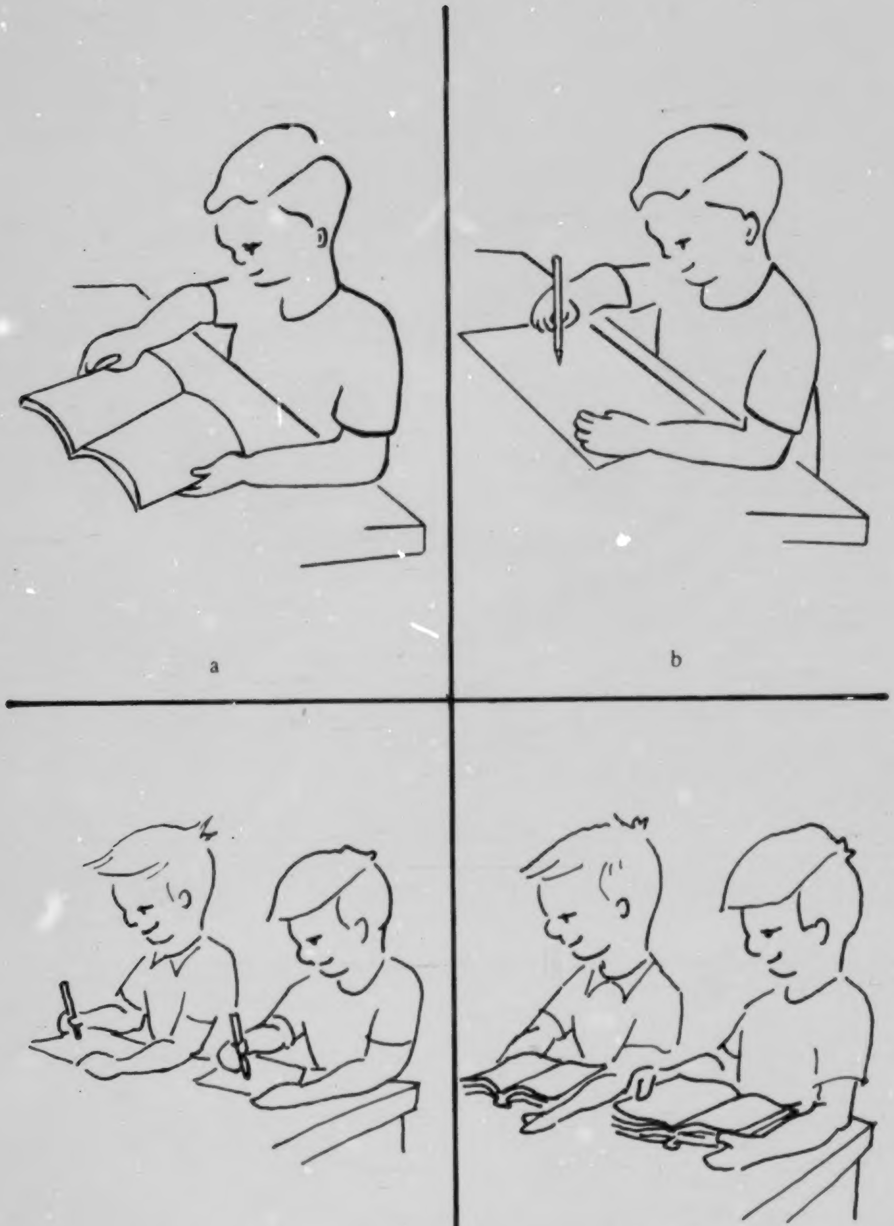
Father's Occupation ______________________ Mother's Occupation ______________________

Examiner ______________________ Testing Location ______________________

1.	The cat is behind the chair. The cat is under the chair.*		1.	The baby is sleeping.* The baby is not sleeping.	
2.	She goes upstairs.* He goes upstairs.		2.	The dog is on the box. The dog is in the box.*	
3.	The cat is on the cupboard. The cat is in the cupboard.*		3.	She sees the car.* He sees the car.	
4.	The boy is sitting.* The boy is not sitting.		4.	The cat is behind the desk. The cat is under the desk.*	
5.	The deer is running.* The deer are running.		5.	The boy pulls the girl. The girl pulls the boy.*	
6	The boy sees the cat. The boy sees the cats.*		6	The fish is swimming.* The fish are swimming.	
7.	The boy sees himself. The boy sees the shelf.*		7.	The girl sees the dog. The girl sees the dogs.*	
8.	The milk spilled. The milk spills.*		8.	This is their wagon.* This is his wagon.	
9.	The car hits [illegible]ain. The train hits [illegible] car.*		9.	The cats play. The cat plays.*	
10.	This is their dog.* This is her dog.		10	Mother says,"Where is that boy?"* Mother says,"Who is that boy?"	
11	This is a mother cat.* This is Mother's cat.		11.	The boy washes himself. The boy washes the shelf.*	
12	The girl will drink.* The girl is drinking.		12	This is my dog.* That is my dog.	
13	Mother says, "Look who is here." Mother says, "Look what is here."*		13	The car is in the garage. Is the car in the garage?*	
14	The dog is in the box. Is the dog in the box?*		14	The boy will throw.* The boy is throwing.	
15	The boy writes. The boys write.*		15	The boy jumped. The boy jumps.*	
16	Mother says,"Where is that girl?"* Mother says,"Who is that girl?"		16	Mother says,"Look who I found." Mother says,"Look what I found."*	
17.	Has Daddy finished dinner? Daddy has finished dinner.*		17	Has the boy found his ball? The boy has found his ball.*	
18	The boy is pushed by the girl.* The girl is pushed by the boy.		18.	This is a baby doll.* This is Baby's doll.	
19.	This is my hat.* That is my hat.		19	The boy is pulled by the girl.* The girl is pulled by the boy.	
20.	The mother shows the kitty the baby.* The mother shows the baby the kitty.		20	The man brings the girl the boy.* The man brings the boy the girl.	
	TOTAL			TOTAL	

Comments:

Northwestern University, 1969



a

b

c

d

Plate 22.16. PICTURE ITEM 15, RECEPTIVE PORTION, NORTHWESTERN SYNTAX SCREENING TEST.

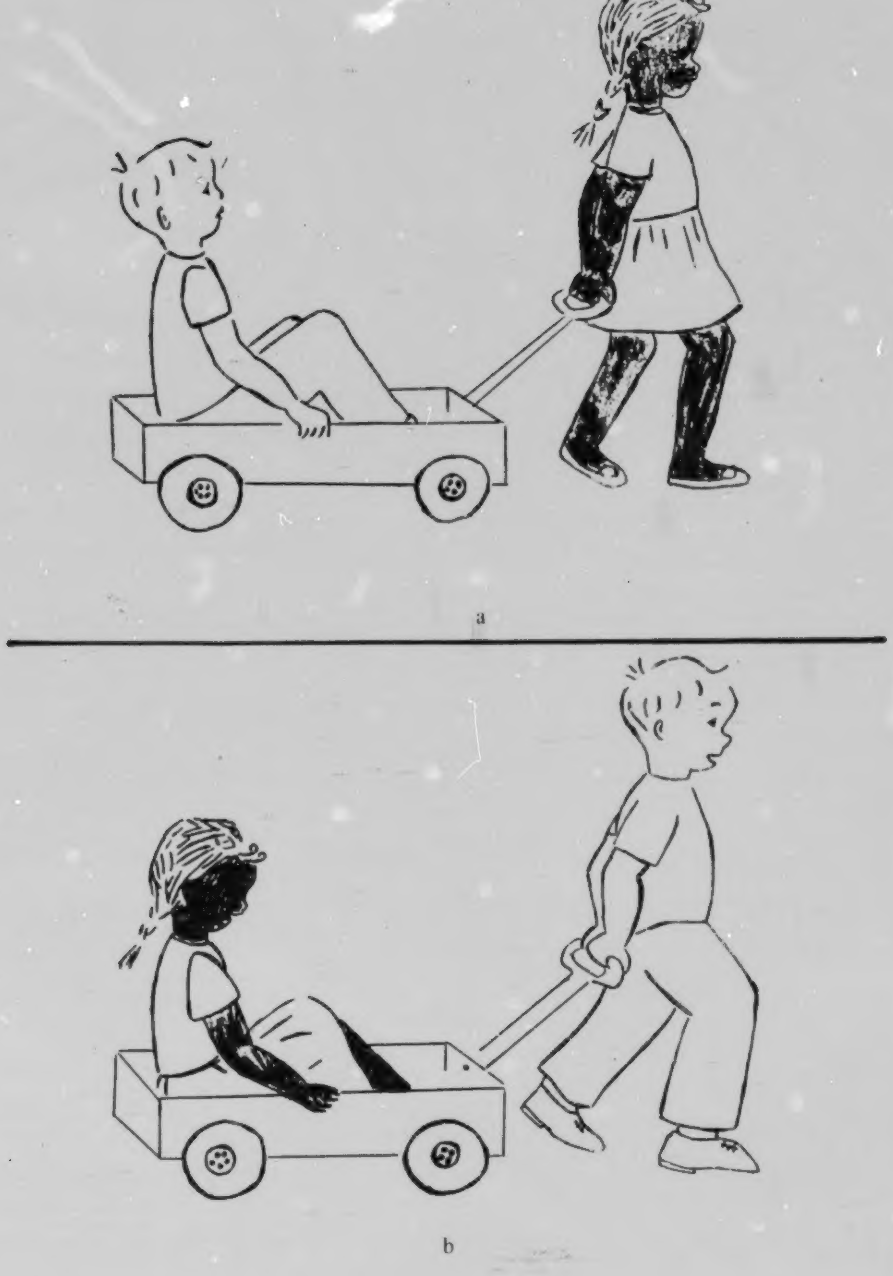


Plate 22.17. PICTURE ITEM 19, EXPRESSIVE PORTION, NORTHWESTERN SYNTAX SCREENING TEST

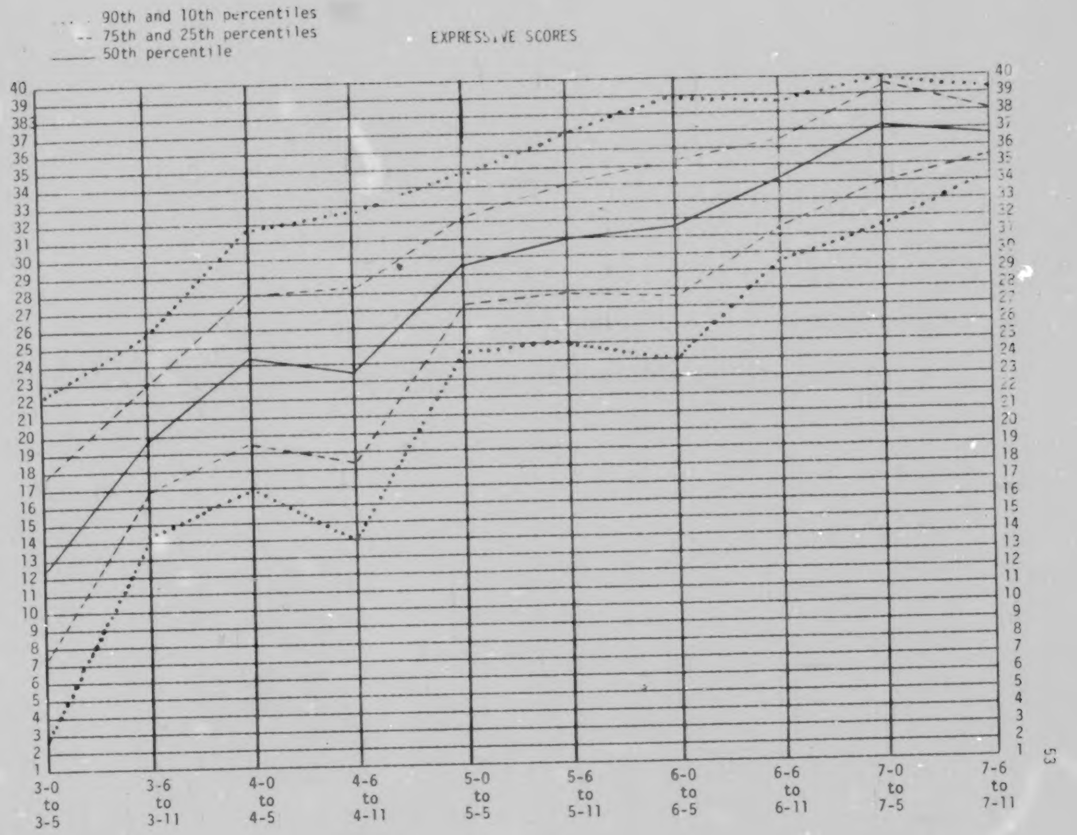


Plate 22.18. PERCENTILES, EXPRESSIVE PORTION, NORTHWESTERN SYNTAX SCREENING TEST

Plate 22.19

PEABODY PICTURE VOCABULARY TEST

This test is a measure of children's receptive vocabulary. It is designed for the age ranges from approximately two years to approximately 18 years. The test kit contains a spiral bound book with Picture Plates (four to a page), a Manual, and Individual Test Records.

The following plates show:

A picture plate at the lowest year level (No. 3) (Plate 22.20);
A picture plate at the upper year levels (No. 116) (Plate 22.21).

The test takes only about 15 minutes to administer, since the child merely needs to point to the picture of the item which the teacher asks for, e.g., "Point to the baby."

The teacher establishes a basal (the last eight consecutive correct responses before the first incorrect one) and a ceiling (six out of eight incorrect responses) and tests the child only over this range. Suppose, for example, a teacher wants to test a child of about 5 years. The suggested item to start with would be "wiener" (25). If the child got all items correct to "net" (41) and missed two items from "freckle" to "signal" but then six items from "capsule" (50 to "counter" (57), his basal would be 41, his ceiling 57, and his raw score 49. From the table for percentile norms in the test manual the teacher could then find that this child scores at the 38th percentile; that is, his receptive vocabulary may be considerably below that of average children of his age.

DUNN, L. M. *Peabody Picture Vocabulary Test)* (Circle Pines, Minn.: American Guidance Service; Inc.)

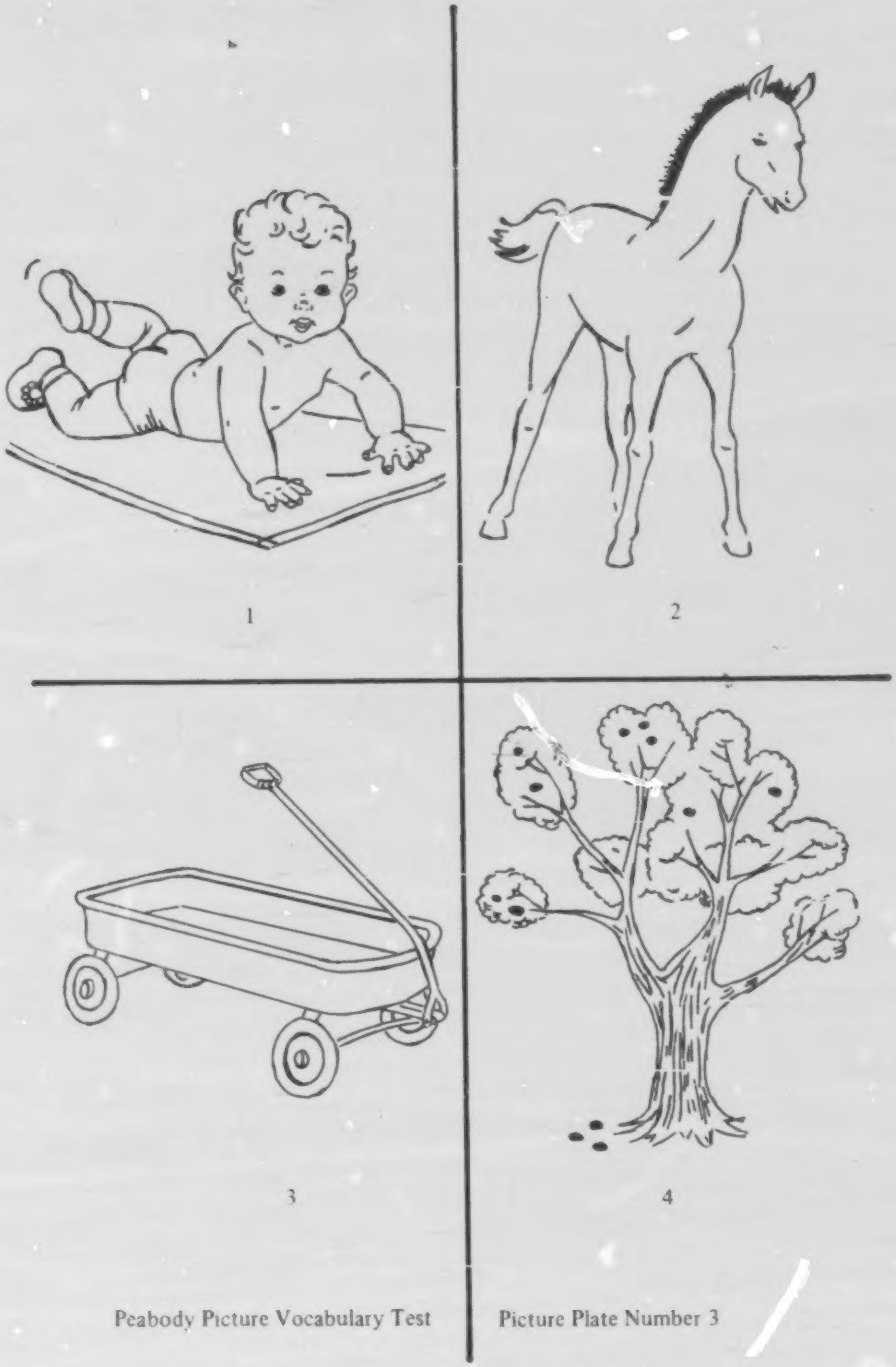

1
2
3
4
Peabody Picture Vocabulary Test
Picture Plate Number 3

Plate 22.20. PEABODY PICTURE VOCABULARY TEST.
PICTURE PLATE NUMBER 3

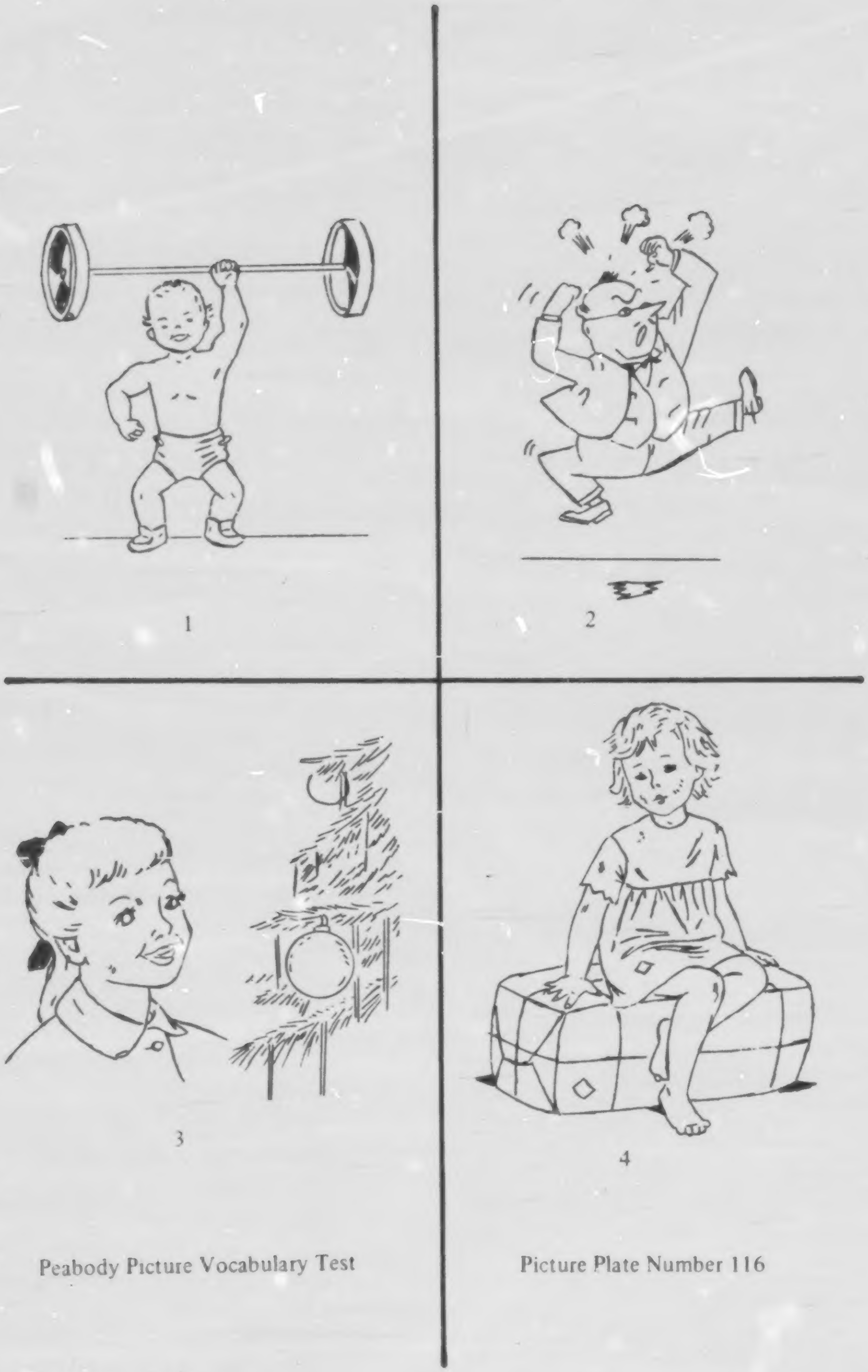

1
2
3
4
Peabody Picture Vocabulary Test
Picture Plate Number 116

Plate 22.21. PEABODY PICTURE VOCABULARY TEST.
PICTURE PLATE NUMBER 116

Plate 22.22

Dialect Deviation Analysis Sheet[8]

Name: ______________________
Date: _______ Birth Place: ___________
Age: _______ Grade: _______
Father's Occupation: ________________
Home Language/Dialect: ______
____
Reading Ability: ___________________
Language Ability: __________________

Deviation Description	Example of Student's Dialect Deviation Occurence	Occurence Yes	 No
1. No distinction between initial /θ/, /t/, /f/, /s/.	John a fin man.		
2. No distinction between initial /ʒ/, /ð/, /v/, /z/.	John gots a brover.		
3. No distinction between bird-Boyd, curl-coil.	She has a coil on her fore-head.		
4. Drop initial weak stress syllable preceding primary stress, professor=fessor, reporter=porter.	Mr. Frank fessor at Columbia.		
5. Over stress on weak syllable preceding primary stress. po-lice, gui-tar, in-surance.	John called the po-lice.		
6. Heavy stress on final weak syllable, accident, president.	We voted for the president of the class.		
7. Drop -s plural marker	Two boy played catch.		
8. Drop 's possessive marker.	That Joe ball.		
9. Analogy of/-n/in mine to other possessive pronouns, ourn, yourn, hisn, hern, theirn.	That pencil is yourn.		
10. Analogy of possessive form in all relexive pronouns, hisself.	Those people hate their-selves.		
11. Substitute them for those.	Them boys tease them girls.		
12. Compound demonstratives, that-there, them-there.	Them-there teachers scare me.		
13. Analyze inflected comparisons, wonderfullest, lovingest	Her kitten is the lovingest.		
14. Double-comparison, a more prettier dress.	Charlie is the most ugliest man.		
15. No distinction of person-number concord with verb Be.	We is here. You was at work.		
16. Omit -s for person-number concord.	He say I no good. Yes, he do.		
17. Omit /-iŋ/ of present participle.	He open a can a sardines.		
18. Omit /-t,-ed,-əd/ of past participle.	Mr. Crosbey has stop teaching.		
19. Omit Be forms before predicate nominatives and adjectives.	She a nice teacher. He handsome.		
20. Omit Be forms before present and past participle.	I going home. The car stalled.		
21. Use Be before present participle to mean habitual action.	I be working for Mr. Charlie.		
22. Omit Be and Have forms before been.	He been driving a Chevy.		
23. Substitute been, done, or done been for have.	Sam done been driving a truck.		

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[8] Used by permission of Lester S. Golub, The Pennsylvania State University.

Plate 22.23

DISTAR INSTRUCTIONAL SYSTEM

The *Language Program* of the Distar Instructional System emphasizes educational rather than social aspects of language. The authors state that, educationally, the main function of language is to make possible the coding of observations. People observe objects and *identify* them verbally, they note their characteristics or *attributes* and describe them. When objects are *classified*, people gain a new way of looking at them — they perceive not only what their senses tell them about them but what their construction of a *concept* allows them to infer about their meaning.

The Distar Language Program is built around such ideas. It distinguishes between "social language" (just talking about things) and the "language of instruction" which is the style of academic communication in school which focuses on the teaching of complex concepts. The Program intends to provide children with those tools of language that are thought to be essential for conceptual development — for example, polar opposites, part-whole relationships, identity, and a wide vocabulary.

Plate 22.24 lists the concepts which are taught in the 180 lessons of Language I, the preschool part of the program. Following is a reproduction of a page from a presentation book which illustrates how a concept is taught (Plate 22.25).

Concerning how the Distar materials are presented, the teacher may notice that the program specifies the objective for each lesson in the right-hand corner. Directions on what the teacher is to *do* are printed in black, what the teacher is to *say* are printed in color (green), and the responses expected from the children are printed in italics.

The program teaches and reviews particular concepts and vocabulary during many lessons and evaluates children's progress with them in periodic tests. A reproduced example of such a test from the first book of the Language Program follows on Plate 22.26. The teacher may notice again, on the test page included here from the first book of the Language Program that the program does all the planning for the teacher and specifies with care what is to be taught, what is to be expected from the child, and where the teacher should go from there. It is of great importance that the teacher not only *be able* to follow the steps and procedures indicated but actually *do so* because the program authors hold that lessons have been very carefully developed, are structured in a logical sequence, and if taught as prescribed will insure efficient learning by the children.

From:
DISTAR^{TM} LANGUAGE I by ENGLEMANN, S., JEAN OSBORN and THERESE ENGLEMANN. Copyright 1969, Science Research Associates, Inc. Reproduced by permission of the publisher.

Plate 22.24

CONCEPTS TAUGHT IN THE DISTAR LANGUAGE 1 PRESENTATION BOOKS

Presentation Book	Part 1	Part 2
Book A	Identity Statements	Polars
	Polars	Prepositions
	Prepositions	Pronouns
	Pronouns	Multiple Attributes
	Multiple Attributes	Comparatives – Superlatives
		Location
		Same – Different
		Only
Book B	Action Statements	Categories
	Categories	Plurals
	Plurals	Why
		Verbs of the Senses
		Verb Tense
		If – Then
		Before – After
Book C	Parts	Parts
	Or	Or
		All
		One
		Some, All, None

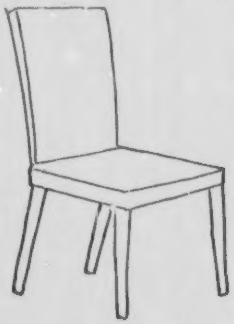
From:
DISTAR™ LANGUAGE 1 by ENGLEMANN, S., JEAN OSBORN and THERESE ENGLEMANN. Copyright 1969, Science Research Associates, Inc. Reproduced by permission of the publisher.

Praise the children for correct responses. Correct mistakes immediately.

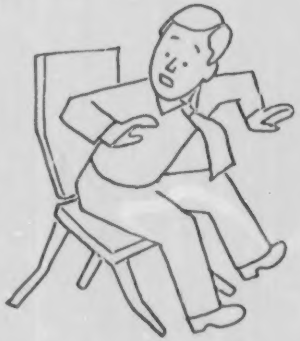
Task 3 Teaching Present and Past Tenses

Group Activity

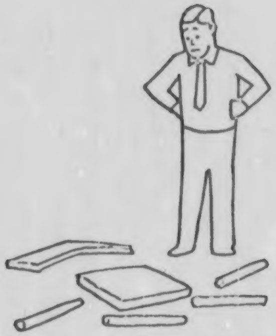
Let's follow the arrow and see what happens.



Point to the chair. What is this? **Accept reasonable answers.**



Point to the chair. What is happening to the chair now? **Accept reasonable answers.**



Point to the chair. This is not a chair. This was a chair. Was this a chair? **Yes.** Say the whole thing. **This was a chair.** Did the man break the chair? **Yes.**

Correction Procedure: Point to the last picture and ask: Is this a chair now? No, this is not a chair. Was this a chair? Yes, this was a chair.

Individual Activity

Repeat the Group Activity with individual children.

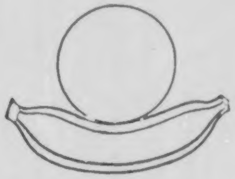
Plate 22.25. EXAMPLE OF CONCEPT PRESENTATION IN DISTAR

From:

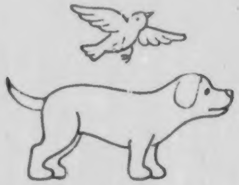
DISTAR™ LANGUAGE I by ENGLEMANN, S., JEAN OSBORN and THERESE ENGLEMANN. Copyright 1969 Science Research Associates, Inc. Reproduced by permission of the publisher.

Test 4 Testing Prepositions and Polars

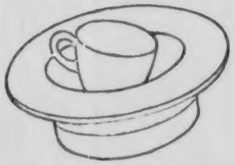
If more than one child misses one or more of the following items, repeat Presentations 33-42 in Book A, taking one presentation each day. If the children pass the test, proceed with Presentation 43 in this book. Present all of the following items to each child.



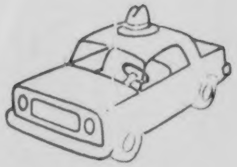
a. **Point to the ball.**
Where is the ball?
Say the whole thing.
The ball is on the banana.



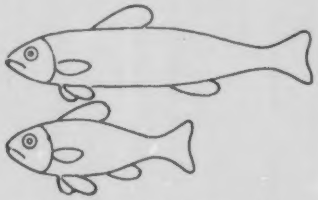
b. **Point to the bird.**
Where is the bird?
Say the whole thing.
The bird is over the dog.



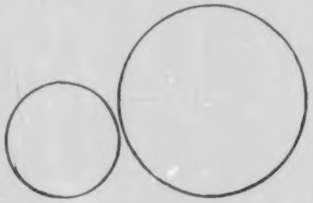
c. **Point to the cup.**
Where is the cup?
Say the whole thing.
The cup is in the hat.



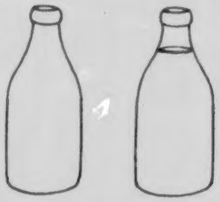
d. **Point to the hat.**
Where is the hat?
Say the whole thing.
The hat is on the car.



e. Find something that is long.
Say the whole thing.
This fish is long.



f. Find something that is not big.
Say the whole thing.
This ball is not big.



g. Find something that is empty
Say the whole thing.
This bottle is empty.

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END OF TEST

Plate 22.26. EXAMPLE OF TEST FROM DISTAR

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Plate 22.27

INTELLECTUAL KIT
TUCSON EARLY EDUCATION MODEL

The Intellectual Kits developed by this program are special kinds of instructional activities whose focus is on language and concept development. The kit is built around a collection of examples of some common object. See the "Possibilities for Materials" on the Sample Planning Card (Plate 22.28) for an indication of how many different samples of an object are gathered to illustrate the concept. A listing of objects which may become the "topic" of a kit is in Plate 22.29.

Instruction proceeds in two steps. First, the kit materials are available to the children for exploration and manipulation. Then, in a structured activity, the teacher guides children toward recognition and verbalization of different perceptual dimensions of the objects such as definitions, labels, and conceptual grouping.

TUSCON EARLY EDUCATION MODEL. (Tuscon. Arizona: Arizona Center for Early Childhood Education).

Plate 22.28

SAMPLE OF PLANNING CARD FOR KIT
TUCSON EARLY EDUCATION MODEL

Chains

Dictionary Definitions

- a series of links or rings connected or fitted into one another used for various purposes as of support, of restraint, or ornament, etc.
- that which confines, fetters, or secures
- a series of things linked together (chain of events; chain of mountains)
- a measuring instrument (engineer's chain, 100 feet long; surveyor's chain, 66 feet)

Possibilities for Materials

jewelry chains
brass or steel sash chains
lock link chains
twist link machine chains
wooden chains
straight link chains
passing link chains
decorative raffia chains
lavatory bead chins
key chains

Instructional Possibilities

- Children given time to explore and manipulate chains in interest centers
- Structured activity:

  Recall:

  > "Where have you seen things like this before? How were they used?"

  Grouping:

  > "Which of these might go together?" (Allow children to explore all possible groupings.)

  Function:

  > "How could these be used? Do we use any in our room, etc.?" "Do you have any at home?"

  Anticipating:

  > "If you had one of these, how would you use it?"

  Identifying raw materials:

  > "What materials are used to make these? Where do these materials come from?"

  Labeling.

  > "What do we call these things? Yes, they are all *chains.*"

Plate 22.28 - Continued

Additional Ideas

- Pictures of how they have seen chains used.

Plate 22.29

SAMPLE MATERIALS FOR INTELLECTUAL KITS TUCSON EARLY EDUCATION MODEL

Aprons

Bags
Baskets
Beauty Aids
Bottles
Boxes
Brushes
Buttons

Candles
Cards
Chains
Clamps
Clothing Parts
Containers
Colors
Combs
Cords
Corks
Covers
Crackers
Cups

Design
Dolls

Fabric
Fasteners
Feeling Kit
Feathers
Footwear
Forks
Fresh Fruits
Fruits

Glass Objects
Gloves

Hard Objects
Hats
Hearing
Hinges
Holes

Jars
Jewelry

Keys
Knives

Leather
Leaves
Light
Listening

Magazines
Magnets
Measuring
Miniatures

Nails
Nuts

Pairs
Paper
Pencils
Plastics
Pockets
Pottery
Pulleys

Scales
Screen
Scissors
Seeds
Shapes
Shells
Shoes
Sieves
Smells
Soap
Socks
Soft Objects
Spoons
Springs

Textures
Tools
Towels

Vegetables

Plate 22.30

THE NEW NURSERY SCHOOL

The developers of the New Nursery School based their program on the assumptions that a positive self image, language, and intellectual ability are essential for children's success in school and later life and that, given a carefully planned learning environment and properly equipped classroom, children will be strongly motivated to learn.

The authors summarize three steps that guide the New Nursery School's language teaching philosophy:

1. *Hearing* the words in a meaningful context. The child should, whenever possible, be actively involved in demonstrating the meaning of the words.
2. *Saying* the words in a meaningful context. Meaningful, rather than "right" responses from the child are expected and encouraged, but not demanded.
3. *Extending the meaning* and use of words. Through this process, the teacher enlarges word meanings beyond their narrow classroom use, and also provides for more individualized instruction through audio-visual aids

These are among the guiding principles which New Nursery School teachers follow in their modeling of language structures:

1. The sentence is the-basic unit of speech. The teacher models in simple sentences and responsively expands children's incomplete utterances to sentences. She does not use direct correction.
2. A category or classification should be included in teachers' sentences whenever possible (e.g , That *color* is yellow) to enhance children's development in conceptual thinking.
3. Words with specific meanings must be used so that referents are clear and children hear and learn to use a precise language of description.
4. All references to object dimensions (e.g., height, size) must be accurate. The teacher must not, for example, say the "biggest" building when she means the "tallest."

The teacher tutors all the time. She echoes and expands a child's expressions, thereby acknowledging her appreciation of what he had to say and encouraging him to continue speaking

The following are representative of the objectives of the program's Learning Episodes for Developing Language Ability, though it should be kept in mind that the Learning Episodes for perceptual development and other areas of learning are designed to foster language concepts as well. Many of the Learning Episodes are built on game activities.

When shown a picture of himself or a classmate performing a familiar action, the child will describe that action.

When shown a familiar object, the child will name and describe it.

When shown a familiar object, the child will name and state its function.

When told the attributes of a familiar object, the child will select it from a group of objects and name it.

Developed by McAFEE, ORALIE, G, NIMNICHT, and J. MEIER at Colorado State College, Greeley, Colorado.

Plate 22.31

LEREC
LEARNING ENGLISH THROUGH RECREATION

Plate 22.32 illustrates the LEREC approach to the *teaching of simple English sentence structures.* This approach was developed in Canada for children in northern provinces who speak an Indian or Inuit language or a non-standard variety of English. Intensive language training in this project is part of recreational summer activities.

The patterns shown in Plate 22.32 represent some of the basic language goals for the youngest group of children in the program: they should acquire enough vocabulary and enough familiarity with basic English structures to be able to express themselves in simple statements. The objective of each pattern, how the teacher (or recreation leader) prepares for and then models the pattern, and the desired responses from children are shown.

These reasons underlie the program's use of an informal, play setting (rather than direct instruction) to teach basic language. First, since the primary goal for all activities is recreational, language-learning objectives must be programed as "incidental" to it. Second, language teaching is considered most effective if it is inherently part of a meaningful context. In a realistic setting, the learner can understand through his own experience the meaning of the language item being taught. Third, teaching can be highly individualized since, when the teacher converses with individual children in the play setting, he can use all the patterns of which he sees they are capable. Lastly, children who are shy may talk more readily in play situations, and, if

the teacher follows the planned sequence of sentence patterns, he will be able to pin-point the child's language needs and give him the most appropriate practice.

MULLEN, DANA, *Learning English Through Recreation: LEREC* (Prince Albert, Saskatchewan: Saskatchewan, New Start, Inc.), 1972.

Plate 22.32

LEREC: SENTENCE-PATTERN MODELING WHILE CHILDREN PLAY WITH (SMALL-WHEELED AND OTHER) TOYS

Objective:	Teacher Prepares for Pattern:	Teacher Calls for Pattern	Child's Possible and/or Acceptable Responses:
1. Child names the toys: car, truck, bus, and other toys available It's a car	Look! Here are some toys. Let's play with the toys Here's a (car) ... etc. What's this? It's a (car) ... etc.	(a) Show me a (car) Give me a (car) . . . etc. (b) What's this?	(a) (action only) (car) a (car) Here's a (car) It's a (car) This is a (car) (b) It's a (car)
2. Child names the colors of the toys: red, [illegible] green, and other colors of the toys It's (red)	What's this? It's a (car). It's (red). What color is it? It's (red) ... etc	What color is this?	(red) It's (red).
3. Child answers "yes" to "yes-no" questions about the toys Yes, it is	This is a (truck). Is this a (truck)? Yes, it is. It's a (truck) ... etc.	Is this a (truck)? etc.	Yes Yes, it is. Yes, it's a (truck)

Plate 22.32

Objective.	Teacher Prepares for Pattern:	Teacher Calls for Pattern	Child's Possible and/or Acceptable Responses:
4. Child answers "yes" to "yes-no" questions about colors. Yes, it is.	This is a (truck). What color is it? It's (yellow). Is this (yellow)? Yes, it is. It's (yellow) ... etc.	Is this (yellow)? ... etc.	Yes. Yes, it is. Yes, it's (yellow).
5. Child answers "no" to "yes-no" questions about the toys. No, it's not.	This is a (plane). Is this a (truck)? No, it's not. It's not a (truck) ... etc.	Is this a (truck)? ... etc. What is it?	No. No, it's not. No, it's not a (truck). It's a (plane).
6. Child answers "no" to "yes-no" questions about the colors. No, it's not.	This is a (bus). What color is it? It's (yellow). Is this (green)? No, it's not. It's not (green) ... etc.	Is this (green)? ... etc. What color is it?	No. No, it's not. No, it's not (green). It's (yellow).
7. [Cumulative questions and answers]	-----------------	What's this? Is it a (truck)? Is it a (bus)? What is it? ... etc. What color is this? Is it (blue)? Is it (green)/ What color is it? ... etc.	It's a (truck). Yes, it is. No, it's not. It's a (truck). It's (blue). Yes, it is. No, it's not. It's (blue).

Plate 22.32

Objective:	Teacher Prepares for Pattern:	Teacher Calls for Pattern	Child's Possible and/or Acceptable Responses:
8. Child asks "yes-no" questions about the toys. Is it a (car)?	I have something in this box. What is it? Is it a (truck)? No, it's not. It's not a (truck). Is it a (car)? No, it's not. It's not a (car). Is it a (plane)? Yes, it is. It's a (plane). Now it's your turn. I have something in this box. What is it? Ask me.	What is it? Guess. No, it's not. It's not a (car). Yes, it is. It's a (car).	Is it a (car)?
9. Child asks "yes-no" questions about the colors. Is it (red)?	I have something in this box. What color is it? Is it (red)? No, it's not. It's not (red). Is it (black)? Yes, it is. It's (black). Now it's your turn. I have something in this box.	What color is it? Guess. No, it's not. It's not (yellow). Yes, it is. It's (yellow).	Is it (yellow)?
10. Child identifies both the toy and its color. It's a (red) (car).	This is a (car). It's (red). It's a (red) (car). This is a (car), too. It's (green). It's a (green) (car). What's this? It's a (red) (car). What's this? It's a (green) (bus) ... etc.	(a) Show me a (red) (car). (b) What's this?	(red) (car) a (red) (car) It's a (red) (car). This is a (red) (car).

Plate 22.32

Objectives:	Teacher Prepares for Pattern:	Teacher Calls for Pattern	Child's Possible and/or Acceptable Responses:
11. Child answers "yes-no" questions about the toys and their colors. Yes, it is. No, it's not.	This is a (yellow) (bus). Is this a (yellow) (bus). Yes, it is. It's a (yellow) (bus). This is a (green) (car). No, it's not. It's not a (blue) (car). It's a (green) (car) ... etc.	(a) Is this a (green) (car)? (b) Is this a (blue) (plane)? What is it?	(a) Yes, it is. (b) No, it's not. It's a (white) (plane).
12. Child asks "yes-no" questions about the toys and colors. Is it a (blue) (car)?	I have something in this box. What is it? Is it a (red) (bus)? No, it's not. It's not a (red) (bus). Is it a (yellow) (bus)? No, it's not. It's not a (yellow) (bus). Is it a (yellow) (truck)? Yes, it is. It's a (yellow) (truck). Now it's your turn. I have something in this box.	What is it? Guess. No, it's not. It's not a (red) (bus). Yes, it is. It's a (red) (bus).	Is it a (red) (bus)?
13. Child answers "alternative" questions.	(a) What's this? Right. It's a (car). Is this a (car) or a (truck)? It's a (car) ... etc. (b) What color is this? Right. It's (blue). Is this (blue) or (brown)? It's (blue) ... etc.	(a) Is this a (bus) or a (car)? (b) Is this (yellow) or (red)?	(a) It's a (bus). (b) It's (red).

Plate 22.32

Objectives:	Teacher Prepares for Pattern:	Teacher Calls for Pattern	Child's Possible and/or Acceptable Responses:
It's a (red) (car).	(c) What's this? Right. It's a (blue) (plane). Is this a (blue) (plane) or a (blue) (bus)? It's a (blue) (plane). Is this a (yellow) (bus) or a (green) (bus)? It's a (green) (bus).	(c) Is this a (red) (car) or a (green) (car)?	(c) It's a (red) (car).
14. Child asks "alternative" questions.	(a) I have something in this box. What color is it? Is it (red) or (yellow)? It's (yellow) ... etc. Now it's your turn.	(a) What color is it? Guess.	(a) Is it (green) or (blue)?
	(b) I have something else in this box. What is it? Is it a (car) or a (bus)? It's a (bus) .. etc. Now it's your turn.	(b) What is it? Guess. It's a (plane).	(b) Is it a (plane) or a (truck)?
Is it a (car) or a (truck)?	(c) I have something else in this box. What is it? Is it a (yellow) (plane) or a (red) (plane)? It's a (red) (plane) ... etc.	(c) What is it? Guess. It's a (red) (bus).	(c) Is it a (red) (car) or a (red) (bus)?

Plate 22.32

Objectives:	Teacher Prepares for Pattern:	Teacher Calls for Pattern	Child's Possible and/or Acceptable Responses:
15. Child uses plural forms in identifying toys. They're (cars).	What's this? Right. It's a (car). And what's this? Right. It's a (car). They're (cars). What are they? They're (cars). How many? 1 - 2 - 3 - 4 4 (cars) ... etc.	(a) Pick up (2 cars) (b) What are they?	(action only) (cars) They're (cars)
16.. Child uses plural in describing the color of toys. They're (green).	What color is this (car)? Right. It's (green). And what color is this (truck)? Right. It's (green), too ... etc. They're (green). What color are they? They're (green) . . etc.	What color are they?	(red) They're (red).
17. Child uses plural in identifying toys with their color.	What's this? Right. It's a (red) (bus) What's this? Right. It's a (red) (bus), too. What are they? They're (red) (buses) .. etc. How many - 2 2 (red) (buses).	What are they?	They're (red) (buses).

Plate 22.32

18 Child answers "yes-no" questions about the toys (plural). Yes, they are. No, they're not	These are (cars) Are these (cars)? Yes, they are They're (cars) ... etc These are (trucks). Are these (buses)? No, they're not They're not (buses). What are they? They're (trucks) ... etc.	Are these (cars)? Are these (buses)? What are they?	Yes. Yes, they are. No. No, they're not They're (trucks).
19. Child asks "yes-no" questions about the toys (plural). Are they cars?	I have some toys in this box. What are they? Are they (cars)? Yes, they are. Look! They're (cars) .. etc. I have some other toys in this box. What are they? Are they (trucks)? No, they're not. They're not (trucks) Are they (planes)? Yes, they are. They're (planes) ... etc. Now it's your turn.	What are they? Guess. Yes, they are They're (cars). No, they're not They're not (cars).	Are they (cars)?

Plate 22.33

SPONTANEOUS LANGUAGE SAMPLE

A sample of continuous, spontaneous utterances made by a 7 ½ year old girl, Leslye Allen, during various class activities is presented below. The utterances were recorded by an observer. Words in parentheses denote the referent of an utterance, i.e. what Leslye is talking about. Words or sentences in square brackets describe the situation, or denote utterances by other children or the teacher, which Leslye responds to.

Art Class

1. Thank you, Linda.
2. Let's keep the cards all together.
3. There's a bug going on the table!
4. It's on the chair!
5. Can you get that out?
6. Erase it all!
7. Is that big enough to fill in?
8. Is mine nice and neat, Jennie?
9. Jennie, you have to get that (string) straight out there.
10. I love Vickie's.
11. How's mine doing?
12. I'm going to take this piece off.
13. Esther, just worry about your cardboard and don't worry about anybody else.
14. Now comes the harder part.
15. Jennie, am I doing something wrong?
16. Jennie, how's that?
17. I'm done already.
18. Jennie, are you going to get another color?
19. I'm going to get a color.
20. Esther, I got pink
21. Jennie, how does mine look?
22. On that one I can use all the colors I can get.
23. Linda, you try!
24. Just turn it around the purple and the blue, and take the pink.
25. Esther, you have that cough enough, don't you?
26. I was talking to Linda.
27. I think we are doing a good job today, Jennie.
28. I have to go all the way around to get there.
29. Jennie, what color is your house?
30. Here, we can use this color, Jennie.
31. How about mine, Esther?

Show and Tell

32. Here's a dog.
33. Here's a fish.

Between Class Periods

34. Is anybody else here, Mrs. Daker?
35. Hey, can you turn that (tape recorder) up?
36. Don't turn it off, turn it up.
37. I see shoes over there.
38. Hi, there's that girl.
39. Who did you teach yesterday?
40. Another mouse chased them.
41. I jumped right off and I don't know where I went.
42. They have a candle.
43. It's a mop.
44. Oh, Jim, you're not a boy.
45. Where's Bobbie, outside?
46. Who are you taking outside? [What do you do outside?]
47. We play, outside the fence.
48. Yesterday I went fishing with my dad. My fishing rod got caught in a rock. The string did and the hook did.

Art Class

[What do you do after you've made the eyes?]

49. Put another one of those [strips of plaster paper].
50. You can't touch mine.
51. Esther, you cut too little. She cut too little.
52. Ah, it's warm. Mine's warm.
53. He's still dripping.
54. See, Gloria puts in cold.
55. How's that.
56. He take our picture.

[Yours is beginning to look like a face.]

57. Me too, because I already did this.
58. What's he going to do?
59. Look, Jennie, I made eyeballs.
60. Does mine look nice?
61. I want to keep my hands clean.
62. It will come right off, Esther.
63. How does mine look, Jennie?

[I want some more paper]

64. Raise your hand, then.
65. Esther, you better – you better get on.
66. Hey, Jennie! She's going to get some more water.
67. I'm going to make a mouth.
68. I'm making a nose.
69. This is his nose – see, that's his nose.
70. I need to put another strip on it.

[Why do you have to put another strip on it?]

71. Because it will fall off.
72. Here's his head.
73. See, mine is covered up.
74. I'm cleaning my scissors right now.

Other

[Shows notebook.]

75. My grandma gave me this.

[What do you do with it?]

76. Write in it.
77 We have reading. You want to watch us during reading?

[When do you have reading.]

78 Eleven thirty.

[Looking at poster picture of girl with flaxen hair who appears to be eating her hair.]

79 That looks like, eh, ah – now, that looks like – her hair looks like spaghetti, yellow. She's eating her hair.
80. It looks like spaghetti, because its yellow, you eat it for dinner.

[Does your grandma cook spaghetti for dinner?]

81. Yes, sometimes my mom does.

[What does she put into this spaghetti?]

82. Sauce in it.

[What else?]

83. Some cheese.

[What kind of cheese is that?]

84. It's in a little jar – it comes out.

Work Recorded	Feb 2	Feb 15	Mar 1	Mar 15	Mar 29	Etc.
can-could	2	3	3	2	4	
may-might	2	4	4	4	4	
shall-should	0	1	3	3	2	
will-would	3	4	6	6	8	
must	1	2	3	3	4	
Total modals used	8	14	19	18	22	
Number of Sentences	25	30	32	28	20	
Activity	Story Telling	Report on Trip	Book Report	Show and Tell	Story Telling	

Dennis Lander, 3rd grade

Plate 22.34. PROGRESS CHART ON SPONTANEOUS USE OF MODALS

Summary

1. Linguistics considers language as having four descriptive levels: phonology, morphology, syntax, and semantics.
2. Language assessment should consider a child's ability at each of these levels.
3. Language assessment should consider imitation, comprehension, and production.
4. When teaching children from nonstandard dialects, the teacher should not strive to eliminate the dialect. A young child's ability to learn language is so great, that his nonstandard dialect does not represent a serious communication or learning barrier.
5. Reading readiness is a function of mental development and must be preceded by competence in oral language skills.
6. To determine the need for a child's referal to a specialist, the teacher must consider individual differences in children, the verbal environment in the home, and any kind of sensory or physical impairment, as well as classroom observations.
7. The main language development objective for a 5 year old is for him to acquire enough words and sentence patterns to express himself in simple sentences.
8. Besides specialized texts, several clearninghouses operated by the Educational Resources Information Center, and other information services, offer guides to language-related research, teaching approaches, and teaching aids.

REFERENCES

Chapter 22

Language Development

ASHER, J. J. The learning strategy of the total physical response. *Modern Language Journal*, 1966, 50, 79-84.

AYERS, G. A. Improving oral communication. *Elementary English*, 1971, 48, 800-806.

BERKO, J. The child's learning of English morphology. *Word*, 1958, 14, 150-177.

BLAND, M. and SOLOMON, F. How shall the disadvantaged child be taught? *Child Development*, 1969, 40, 47-61.

BROWN, R. and BELLUGI, U. Three processes in the child's acquisition of syntax. In E. H. Lenneberg (Ed.)., *New Directions in the Study of Language*, Cambridge, Mass.: MIT Press, 1961, 131-161.

CAZDEN, C. B. *The acquisition of noun and verb inflections*. Harvard University paper, 1967.

CAZDEN, C. B. Subcultural differences in child language: An interdisciplinary review. *Merrill-Palmer Quarterly*, 1966, 12, 1966, 185-219.

CHOMSKY, N. Language and the mind. *Psychology Today*, 1968, 1, 48-51, 66-68.

ERVIN, S. M. Imitation and structural change in children's language. In E. H. Lenneberg (Ed.), *New Directions in the Study of Language*, Cambridge, Mass.: MIT Press, 1964, 163-189.

FASOLD, R. W. and WOLFRAM, W. Some linguistic features of Negro dialect. In W. Fasold and R. Shuy (Eds.), *Teaching Standard English in the Inner City*, Washington, D.C.: Center for Applied Linguistics, 1970, 41-86.

FRIES, C. C. *American English grammar*. New York. Appleton-Century-Crofts, 1940.

FRY, D. B. The development of the phonological system in the normal and the deaf child. In F. Smith and G. A. Miller (Eds.), *The Genesis of Language: A Psycholinguistic Approach*, Cambridge, Mass.: MIT Press, 1966, 187-206.

JOHN, V. P and MOSKOVITZ, S. Preschool intervention programs with a language focus (Section of Chapter 6). In A. H. Marckwardt, (Ed.), *Linguistics in School Programs: The Sixty-Ninth Yearbook of the National Society for the Study of Education*, Part II, Chicago: NSSE, 1970, 189-205

GLASSMAN, L Directory of resources on early childhood education. *Exceptional Children*, 1971, 38, 702-712

GRIFFIN, W J Children's development of syntactic control. In S. Rosenberg and J H Koplin (Eds.), *Developments in Applied Psycholinguiistics Research*, New York: Macmillan Co., 1968, 19-65.

GUPTA, W. and STERN, C. Comparative effectiveness of speaking versus listening in improving spoken language of disadvantaged young children. *Journal of Experimental Education*, 1969, 38, 54-57.

JENKINS, J. J. and PALERMO, D. S. Mediation processes and the acquisition of linguistic structure. In U. Bellugi and R. Brown (Eds.), *The Acquisition of Language*. Yellow Springs, Ohio: Antioch Press, 1964, 141-169

JOOS, M. Language and the school child. *Harvard Educational Review*, 1964, 34, 203-210

KUENNE, M. R. Experimental investigation of the relation of language to transposition behavior in young children *Journal of Experimental Psychology*, 1946, 36, 471-490

LENNEBERG E. H. Understanding language without ability to speak: A case report *Journal of Abnormal Social Psychology*, 1962, 65, 419-425

LEWIS M S. Teaching children to listen *Education*, 1960, 80, 455-459.

LIEBERT B L *Linguistics and the new English teacher: An introduction to linguistics approaches in language instruction* New York: Macmillan, 1971

LOBAN, W. Teaching pupils to use language effectively In P S Anderson (Ed.), *Linguistics in the Elementary School Classroom*, New York: Macmillan, 1971, 322-326

LOTZ, J Linguistics. Symbols make man In S. Saporta (Ed.), *Psycholinguistics: A Book of Readings*, New York: Holt, Rinehart and Winston, 1961, 1-15

LURIA, A. R. *The mentally retarded child*. New York: Macmillan, 1963.

MACKEY, W. F. *Language teaching analysis*. London: Longmans, Green and Co., Ltd., 1965.

McAFEE, O., NIMNICHT, G. and MEIER, J. *The new nursery school*. Learning Activities Booklet 1. New York: General Learning Corporation, 1969.

McNEILL, D. Developmental psycholinguistics. In F. Smith and G. A. Miller (Eds.), *The Genesis of Language: A Psycholinguistic Approach*, Cambridge, Mass.: MIT Press, 1966, 15-84.

MENYUK, P. Language theories and educational practices. In F. Williams (Ed.), *Language and Poverty: Perspectives on a Theme*, Chicago: Markham, 1970, 190-209.

MENYUK, P. *The acquisition and development of language*.Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1971.

MENYUK, P. *The development of speech*. Bobbs-Merrill Studies in Communicative Disorders, Indianapolis: Bobbs-Merrill Co., Inc., 1972.

MEYER, W. J. and GOLDSTEIN, D. *Levels of cognitive functioning as indexed by performance on two language assessment tasks*. Syracuse University, Code No. S-AP, undated paper

MOORE, D. R. *Language research and preschool language training*, 1970, ERIC: ED 040 767

MURRAY, D. J. Vocalization-at-presentation and immediate recall, with varying presentation rates. *Quarterly Journal of Experimental Psychology*, 1965, 17, 47-56.

NASA Commentary from Apollo 8 and Apollo 11 missions. Used with permission of Charles J. Bauer, Jr., Administrative Officer, NASA Manned Spacecraft Center, Houston, Texas.

O'CONNOR, N. and HERMELIN, B. *Speech and thought in severe subnormality*. London: Pergamon Press, 1963

PALMER, H. E. *The scientific study and teaching of languages*. London: Oxford University Press, 1968

RICHARDSON, S. O. Language training for mentally retarded children. In R. L. Schiefelbusch, et al; (Eds.), *Language and Mental Retardation: Empirical and Conceptual Considerations*, New York: Holt, Rinehart and Winston, Inc., 1967, 146-161.

ROSENBAUM, M E Effect of direct and vicarious verbalization on retention *Child Development*, 1962, 33, 103-110.

ROSENBERG, S Problems of language development in the retarded. In H. C Haywood (Ed.), *Social-cultural Aspects of Mental Retardation*, New York: Appleton-Century-Crofts, 1970, 203-216.

ROBINSON, H. B. and ROBINSON, N M *The mentally retarded child: A psychological approach*. New York: McGraw-Hill, 1965.

SHINE, R E and FREILINGER, J J. *Pratical methods of speech correction for the classroom teacher*, Davenport, Iowa: Teaching Aids Company, 1962

SHUY, R Teacher training and urban language problems. In R W Fasold and R W Shuy (Eds), *Teaching Standard English in the Inner City*, Washington, D C : Center for Applied Linguistics, 1970, 120-141.

SHUY, R *Discovering American dialects*. Champaign, Illinois: National Council of Teachers of English, 1967

SLOBIN, D I. Comments on 'Developmental psycholinguistics ' In F. Smith and G A Miller (Eds), *The Genesis of Language* Cambridge, Mass : MIT Press, 1966, 85-91

SLOBIN, D I (Ed) *A field manual for cross-cultural study of the acquisition of communicative competence* University of California, Berkeley, 1967

STANLEY, J C (Ed.) *Preschool programs for the disadvantaged Five experimental approaches to early childhood education* Baltimore: Johns Hopkins University Press, 1972.

STRICKLAND, R Linguistics and language In P S Anderson (Ed.), *Linguistics in the Elementary School Classroom*, New York: Macmillan, 1971 18-30

VON FRISCH, K *Bees, their vision, chemical senses and language* New York: Cornell University, 1950, 70, Figure 42. Used with permission

VYGOTSKY, L S. *Thought and language* Translated by Eugenia Hanfmann and Gertrude Vakar Cambridge, Mass.: MIT Press, 1962

WEENER, P Notetaking and student verbalization as instrumental learning activities *Instructional Science* submitted for publication February 1973

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Application of the Diagnostic Teaching Model VII

VIII IX X

- CHAPTER 22. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO LANGUAGE DEVELOPMENT
- CHAPTER 23. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL
  Reading is defined as the process of getting meaning from written symbols to communicate and solve problems.
    - Reading is a means to an end, not an end itself.
    - Reading readiness encompasses five major areas: visual skills, listening, language and speech, social and emotional development, and intellectual interest in reading.
    - Reading is divided into two major skill areas: vocabulary and comprehension.
    - Evaluation of reading skills should include criterion-referenced tests, general assessment of comprehension and application of reading, and teacher observation of behavior during reading to detect evidence of independence and enjoyment of reading
- CHAPTER 24. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MATHEMATICS
- CHAPTER 25. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO SOCIAL AND EMOTIONAL DEVELOPMENT
- CHAPTER 26 APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MOTOR DEVELOPMENT

CHAPTER TWENTY-THREE

READING

This chapter concerns reading and the application of the Diagnostic Teaching Model to teaching reading in the primary grades.

Reading is a complex subject with many different definitions. Reading here is defined as the process of getting meaning from written verbal symbols to communicate and solve problems. Reading is another use of language, but it is not a naturally evolving process like learning to speak. Reading is a means to an end, not an end in itself. It is used in many contexts. All children and adults need reading skills. But for an adult, reading is an activity with a purpose. An adult reads for a specific reason, even if that reason is sheer enjoyment. Children need to read for their own good reasons, too.

Reading Readiness

Reading readiness is a term used to mean that a child is ready for systematic reading instruction. But readiness is a dynamic process which must be observed constantly, as each new skill is tackled. The five areas of reading readiness include:

visual skills
listening
speech and language
social and emotional development
intellectual interest in reading

More specific information on skills in each area is found in the readiness checklist (Plate 23.1).

Oral language is a necessary prerequisite to reading for the normal child. An adequate command of oral language should precede systematic reading instruction. The oral language assessment constructed in Chapter 22 is a good way to measure oral language competency.

Reading is divided into two major skill areas: vocabulary and comprehension.

Plate 23.1

READINESS CHECKLIST

Visual Skills

- Identify specific details in pictures
- Able to shift focus easily and accurately
- Good visual discrimination for shapes, letters
- Good hand-eye coordination, near
- Good left-to-right sequencing

Speech and Language

- Free from substitutions and baby talk
- Able to communicate in conversation and with group
- Reasonable fluency and sentence structure

Listening

- Able to attend to and recall story
- Able to answer simple questions
- Able to follow simple directions
- Able to follow sequence of story
- Able to discriminate sounds of varying pitch and loudness
- Able to detect similarities and differences in words
- Sufficient auditory vocabulary for common concepts

Social and Emotional Behavior

- Able to work independently or in group
- Able to share materials
- Able to await turn for teacher's attention
- Able to lead or to follow

Intellectual Data and Interest in Learning to Read

- Shows interest in signs and symbols
- Is interested in listening to stories
- Can tell some stories and recite some poems or rhymes
- Likes to look at the pictures in books
- Can attend to the continuity in a sequential picture book
- Makes up stories about a picture
- Asks to take books home; brings some to school
- Tries to identify words in familiar book

Adapted From:

SPACHE, G. D., and EVELYN B SPACHE. *Reading in the Elementary School* Boston: Allyn & Bacon, 1973, p. 76.

Vocabulary

Vocabulary requires a knowledge of the sound and meaning of specific words. A major division is between content and function words. Content words carry the major meanings in a sentence (nouns, verbs, adjectives, adverbs). Function words show relationships and tie the sentence together (pronouns, prepositions, conjunctions, auxiliary verbs).

Five major areas of vocabulary are taught in primary grades. The first element is normally a small but gradually increasing *sight vocabulary* which the child learns by memory. Then he is introduced to *phonics* work, or sound-letter relationships, which he will learn in a well-developed sequence during his first two or three years. At the same time, he is learning new words by *structural analysis,* which includes root words, prefixes and suffixes (endings), compound words, contractions, and syllabication.

A fourth major area of vocabulary is *context,* using known words surrounding an unknown word to figure out what the unknown word means. To learn new words by using context, the child must learn to divide sentences into units (phrases, clauses) and see the relationships between them. Seeing how the units fit together is important in context training. Pronouns and other referents are especially useful. The *dictionary* is the fifth means of attacking new vocabulary. This tool is not used extensively in primary grades, but it should be introduced.

Comprehension

Comprehension is the other major area of reading skills. For convenience, comprehension is divided into five levels and types of questions: *locating information, remembering, organizing, predicting and extending,* and *evaluating.* These five levels correspond in general to the levels in the taxonomy of learning, cognitive domain. More detailed analyses of these five areas are given in Plate 23.2 along with criteria for the teacher to use in judging whether questions he devises are, in fact, assessing at the level specified.

Diagnostic Teaching of Reading

A teacher following the Diagnostic Teaching Model for reading instruction will rely upon teacher observations, school records, diagnostic tests administered by reading specialists, informal reading inventories, and, perhaps most important, criterion-referenced tests to determine the relevant attributes of the particular child. These tests may be based strictly on the teacher's objectives or may be commercially prepared such as the tests in the Fountain Valley Teacher Support System. The objectives for teaching a child are derived specifically from these diagnostic methods. *Strategies* and *materials* are chosen to fit the child's preferred way of learning, or the one at which he succeeds most — programmed material, or basal readers, individual free reading, skill-building work, etc.

Plate 23.2

LEVELS OF COMPREHENSION

Skills/Practice Tasks

A. Locating specifics within written materials

1. Locating phrases
2. Locating sentences
3. Locating paragraphs
4. Locating pages
5. Locating parts of a story
6. Locating chapters
7. Locating introduction
8. Locating summary

Criteria for Locating
Information Questions

1. Be specific.
2. Allow student to use the book (selection) to answer.
3. Did you use "locators" like find, point, name? Question words like where, what?
4. Did you ask for page/paragraph sentence/line/part of the story?
5. Did you ask student to use parts of the book to find the information?
6. Did you ask student to use other reference aids to find the information?

Skills/Practice Tasks

Criteria

B. Locating information with book parts

1. Locating titles
2. Locating stories
3. Locating the preface
4. Locating the introduction
5. Locating and using the contents
6. Locating publishing information (publisher, copyright)
7. Locating lists of illustrations
8. Locating specific chapters
9. Locating and using indexes
10. Locating and using bibliographies
11. Locating and using footnotes
12. Locating glossaries
13. Locating the appendix

C. Locating information with reference aids

1. Dictionaries (picture and word, used as encyclopedias)
2. Encyclopedias
3. Atlases
4. Maps (physical, political, geological)
5. Globes (earth, lunar)
6. Telephone books
7. Directories
8. Newspapers
9. Magazines
10. Timetables (air, bus)

Skills/Practice Tasks	Criteria
D. Following written directions	

II. Remembering

Skills/Practice Tasks	Criteria
A. Remembering simple sentence content; for example, Dick can run. (What is it that Dick can do?)	1. Be specific.
B. Remembering the content of two or more simple sentences in sequence; for example, Jane likes to jump. Sally likes to run and jump. (What is it that Jane and Sally like to do?)	2. Don't allow use of the test to check this skill.
C. Remembering the factual content of complete sentences and complex sentence sets; for example, specific happenings or titles.	3. Did you emphasize memory of useful or necessary information?
	4. Did you emphasize recalling in the student's own words, rather than memorizing book?

III. Organizing

A. Child retells orally or in writing the content of
    A simple sentence (complex)
    A simple sentence set (complex)
    A simple paragraph (complex)
    A simple paragraph set (complex)
    A simple story (complex)
    An idiomatic expression

Skills/Practice Tasks	Criteria
B. Child outlines orally or in writing the sequence of Sentence sets Paragraph sets A story	1. Be specific. 2. Did you ask the student to translate the material into his own words? Paraphrase? 3. Did you ask for sequence? 4. Did you ask for summary?
C. Child reorganizes communication into Picture Cartoon Graphic design Formula (boy + motorcycle = trouble)	
IV. Predicting Outcomes and Extending Ideas	
A. Predicting convergent outcomes from pictures Predicting convergent outcomes from pictures and titles Predicting convergent outcomes from story situations Predicting divergent outcomes Explaining why story characters hold certain viewpoints Generalizing from sets of information in a story (includes the task of identifying an unstated main idea) Labeling the feelings of characters	1. Be specific. 2. Did you ask what happened before? 3. Did you ask what happened after? 4. Did you ask what comes next? 5. Did you ask what the picture suggests?

V. Evaluating Critically

Skills/Practice Tasks	Criteria
A. Making judgments about the desirability of A character A situation	1. Be specific. 2. Did you ask how the cat/student feels? 3. Did you ask whether an action/attitude is cat-like? 4. Did you ask whether this is like other cats/cat stories?
B. Making judgments about the validity of A story description An argument by comparison with other sources of information	
C. Making judgments about the validity of A story A description An argument by internal comparison for consistency, logic, and so on	
D. Making judgments about whether stories are fictional or nonfictional by noting Reality Fantasy Exaggeration	
E. Making judgments about the author's purpose	

Adapted from
GUSZAK, F. J. *Diagnostic Reading Instruction in the Elementary School.* New York: Harper and Row, 1972, pp. 54-59.

It is assumed that most schools will have a basal reading series as the foundation of the reading program. A basal series is a carefully controlled and sequenced program in which phonics and other word attack skills are systematically introduced over a period of several years. Basals have that advantage – a teacher need not worry that essential skills will not be covered. However, basals have weaknesses, too. They are often stereotyped in content and not related to student interest. They are rigid in structure and allow less opportunity for individualization. It is generally agreed that a complete reading program needs to include supplementary materials to broaden the basal reader approach. A list of some examples of such supplemental materials follows later in this chapter.

Evaluation of a learner's progress in reading needs to include criterion-referenced tests on his reading skills, some more general testing of his comprehension and application of reading (perhaps by teacher-pupil conferences) and teacher observation of his attitude toward reading to detect evidence of both independence and enjoyment in reading.

The wise teacher prepares reading instruction with great care and specificity, using as much individualization as possible. The wise teacher considers the child's psychological situation and other affective factors to develop a positive attitude toward reading and school. Reading is the single most important factor in a child's attitude toward school. Hence a major concern for the teacher must be the child's continued success and satisfaction in reading situations.

Plate 23.3

ELEMENTS OF VOCABULARY: CONTEXT CLASSIFICATIONS

DEFINITION. The descriptive context defines the unknown word. For example, Tom and Dick lived next door. They were _____.

EXPERIENCE. Children use past experiences to complete the thought. For example, Jack gave his dog a _____ to chew.

COMPARISON WITH KNOWN IDEAS. The unknown word is compared to something known. For example, you do not have to run, you can _____ .

SYNONYM. The preceeding context offers a synonym of the unknown word. For example, when the captain gave up, the crew had to _____ too.

FAMILIAR EXPRESSION. Our language is literally filled with expressions that are meaningful to native speakers but confusing to those learning the language. For example, if he isn't careful he's going to put his foot in his _____.

SUMMARY. An unknown word serves to summarize previous concepts. For example, down the street came the elephants, clowns, and cages. The _____ had come to town.

REFLECTION OF A MOOD OR SITUATION. The clouds were black. Scarcely any light came in the window. The house seemed very dark and _____.

Adapted from

GUSZAK, F. J. *Diagnostic Reading Instruction in the Elementary School.* New York: Harper and Row, 1972, p. 29.

Plate 23.4

ELEMENTS OF VOCABULARY: SYLLABICATION

Words have as many syllables as they have vowel sounds. Breaking a word into its component syllables is called syllabication. As adults we don't always engage in a long, formal process of syllabicating new words in order to pronounce them; rather we often read from left to right and pronounce one unit or syllable (one vowel sound) after another. Many times children will need (particularly while learning syllabication) to divide a multisyllable word in a careful step-by-step manner. Through assiduous use of context, pupils become more adept at word identification.

There are four basic rules for dividing words into syllables. Simply stated these rules are as follows:

1. The *vc/cv* rule. Divide between consonants:

   af/ter
   din/ner

2. The *v/cv* rule. In a vowel-consonant-vowel group, divide before the consonant:

   ba/by
   o/pen

3. The *c-le* rule. At the end of a word, divide before the consonant that comes before le:

   ta/ble
   ma/ple
   grap/ple
   un/cle

4. The affix rule. Affixes (prefixes and suffixes) usually form separate syllables:

   pre/fix
   re/gain
   help/less

Note: Consonant blends (*e.g., cl, pr),* consonant digraphs (*e.g., th, gh),* and vowel digraphs (*e.g., ai, oa)* usually are not divided.

Adapted from
HAFNER, L. E., and H. B. JOLLY. *Patterns of Teaching Reading in the Elementary School.* New York: Macmillan, 1972, pp. 113-114.

Plate 23.5

THE FAT CAT

One time there was a fat cat.
He was very, very fat.
He did not want to be fat.
He wanted to be thin.

"I wish I were not so fat,"
said the cat.
"A cat should be thin."

One day the fat cat said,
"I will not be fat any more.
I will be thin. I will run.
I will run and run.
That will make me thin."

The cat ran. He ran and ran.
He ran here. He ran there.
He ran to the right.
He ran to the left.
He ran up. He ran down.
He ran until he
could not run any more.

"Now I am thin," said the fat cat.
But he was not thin. He was still fat.

"Dear me," said the fat cat.
"I ran and ran.
But I am still fat. What can I do?"

He thought and thought.
He thought of this.
He thought of that.
He thought for two days
and two nights.
He thought until he
could not think any more.

"I know," said the fat cat.
"I will jump. I will jump and jump.
That will make me thin."

The cat jumped.
He jumped and jumped.
He jumped here. He jumped there.
He jumped to the right.
He jumped to the left.
He jumped up. He jumped down.
He jumped until he
could not jump any more.

"Now I am thin," said the fat cat.
But he was not thin at all.
He was still fat.

"Dear, dear me," said the fat cat.
"I ran and ran. I jumped and jumped.
But I am still fat. What can I do?"

He thought and thought.
He thought of this.
He thought of that.
He thought for two long days
and nights.
He thought until he could not
think any more.

"I know," said the fat cat.
"I will roll. I will roll and roll.
That will make me thin."

The cat rolled.
He rolled and rolled.
He rolled here. He rolled there.
He rolled to the right.
He rolled to the left.
He rolled up. He rolled down.
He rolled until he
could not roll any more.

"Now I am thin," said the fat cat.
But he was not thin, of course.
He was still very fat.

"Dear, dear, dear me,"
said the fat cat.
"I ran and ran. I jumped and jumped.
I rolled and rolled.
But I am still fat. What can I do?"

He thought and thought.
He thought of this.
He thought of that.
He thought for two hot days
and two cold nights.
He thought until he
could not think any more.

"I know," said the fat cat.
"I will meow as much as I can.
I will meow and meow.
That will make me thin."

The cat meowed.
He meowed and meowed.
He meowed here. He meowed there.
He meowed to the right.
He meowed to the left.
He meowed up. He meowed down.
He meowed until he
could not meow any more.

"Now I am thin," said the fat cat.
But of course he
was not thin at all.
He was still fat.

"Dear, dear, dear, dear me,"
said the fat cat.
"I ran and ran. I jumped and jumped.
I rolled and rolled.
I meowed and meowed.
But I am still fat.
What should I do now?"

He thought and thought.
He thought of this.
He thought of that.
He thought for two sunny days
and two rainy nights.
He thought until he
could not think any more.

"I know," said the fat cat.
"I will lick my fur.
I will lick it and lick it.
That will make me thin."

The cat licked his fur.
He licked it and licked it.
He licked it here. He licked it there.
He licked it to the right.
He licked it to the left.
He licked it up.
He licked it down.
He licked it until he
could not lick it any more.

"Now I am thin," said the fat cat.
But he was not thin at all.
He was still very fat.

"Dear, dear, dear, dear, dear me,"
said the fat cat.
"I ran and ran. I jumped and jumped.
I rolled and rolled.
I meowed and meowed.
I licked my fur and licked my fur.
But I am still fat.
What can I do now?"

He thought and thought.
He thought of this.

He thought of that.
He thought for two summer days
and two summer nights.
He thought until he
could not think any more.

"I know," said the fat cat.
"I will chase butterflies.
I will chase butterflies
and chase butterflies.
That will make me thin."

The cat chased butterflies.
He chased them and chased them.
He chased them here.
He chased them there.
He chased them to the right.
He chased them to the left.
He chased them up.
He chased them down.
He chased them until he
could not chase them any more.

"Now I am thin," said the fat cat.
But he was not thin.
He was fat, fat, fat.

"Dear, dear, dear, dear, dear, dear me,"
said the fat cat.
"I ran and ran. I jumped and jumped.
I meowed and meowed.
I licked my fur and licked my fur.
I chased butterflies
and chased butterflies.
But I am still fat.
What, oh, what can I do?"

Just then he saw another cat
come up the walk.
The other cat was eating and eating.
He was eating here.
He was eating there.
He was eating to the right.
He was eating to the left.
He was eating up. He was eating down.

"What are you doing?"
asked the fat cat.

"I am eating," said the other cat.
"I am eating and eating.
See how thin I am?
I want to be nice and fat like you."

"Dear me," said the fat cat.
"Fat cats want to get thin,
and thin cats want to get fat.
I may just as well
stay the way I am."

The fat cat smiled.
He smiled and smiled.

He ran here. He jumped there.
He rolled to the right.
He meowed to the left.
He licked his fur up.
He chased a butterfly down.

"What fun it is to be a fat cat!"
said the fat cat.

From
Up and Away. Curriculum Enrichment Series. Chicago: Lyons and Carnahan, 1965.

Plate 23.6

PAGE FROM STUDENT RECORD FOLDER

Permanent Record

Jack Smith — Admitted Sept. 1, 1972
1st grade — Mrs. Black

Grades:

	1	2	3	4
Arithmetic	P	N	P	P
Language Skills	P	P	P	P
Reading	P	P	N	P
Social Studies	-	–	N	P
Science	P	P	P	P
Art and Music	–	P	–	P

P – Progress Satisfactory
N – Needs Improvement

Test Scores:

Metropolitan Readiness Tests, Form A
Administered: Nov. 10, 1972
Total Score: 52 40 percentile

Stanford Achievement Test, Primary I Battery
Administered: May 12, 1973

	Grade Score	Percentile
Word Reading	1.7	26
Paragraph Meaning	1.9	50
Vocabulary	2.0	56
Spelling	1.6	30
Word Study Skills	1.6	23
Arithmetic	2.4	80

Plate 23 7

THE INFORMAL READING INVENTORY

The Informal Reading Inventory (IRI) is a diagnostic tool designed to place a child in the reading level best suiting him at a particular point in time. Teacher responsibility includes choosing 100-200 word selections on specified reading levels and devising 4 comprehension questions on each passage. As the student reads the passage aloud, the teacher notes errors in his oral reading. These errors can be classified in detail or can simply be noted as gross errors. Similarly, the teacher records the child's success in answering the comprehension questions. The teacher aims to find three general levels for each child – his independent, instructional, and frustration levels. His *instructional level* is the level at which he can be taught successfully. He makes 2 to 4 errors in oral reading and has at least 90 percent on comprehension. His *independent level* is the level at which he can read without any help. This is characterized by no errors in oral reading and 95 percent or better on comprehension. This is generally one grade level below his instructional level. His *frustration level* is the level at which he cannot function with any success. Any instruction at this level or above it will be unsatisfactory. This is generally at the point where he makes 5 or more errors in oral reading and/or has 50 percent or less on comprehension.

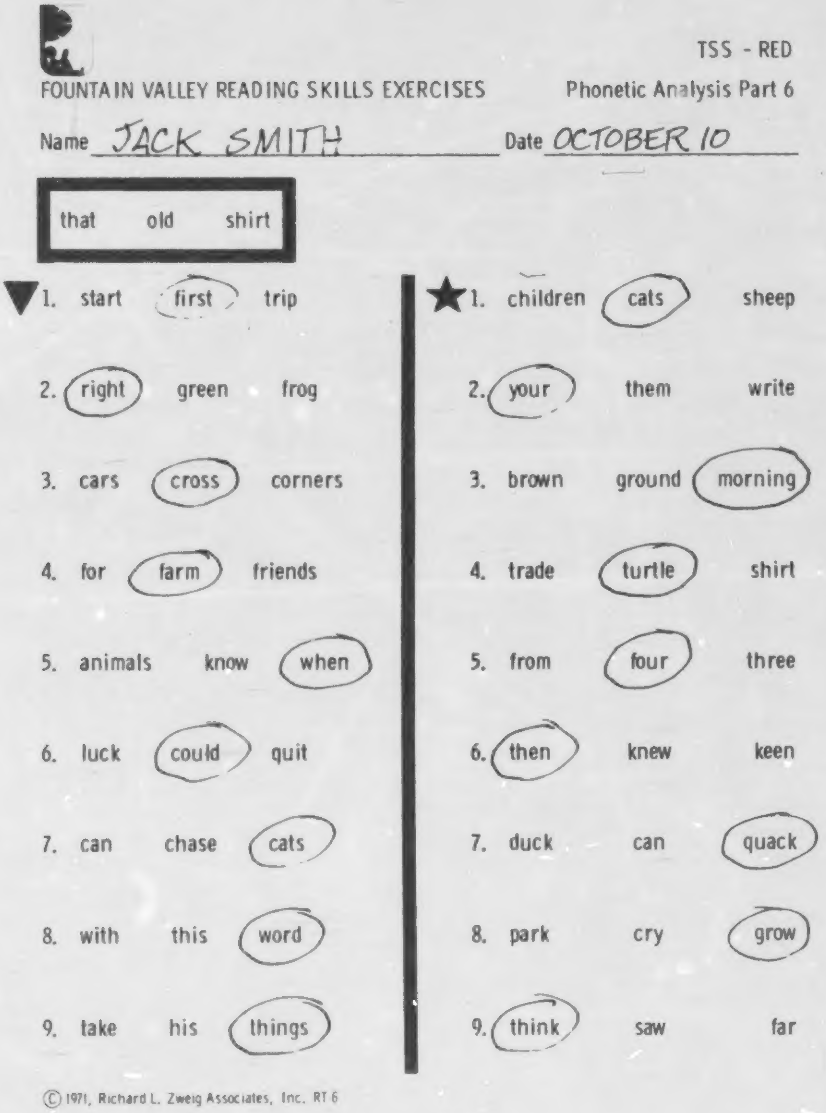
Sample Inventory Passage

WHAT WAS IT?

Hop, hop went Little Rabbit up the big green hill.
All at once he saw something red going down the hill.
Swish, swish went the red thing.
Swish went Fat Puppy after it.
Little Rabbit said, "Well, well!
That is a pretty red thing.
Maybe it's something to eat.
I think I'll try to get it.
Maybe I can get down the hill faster than Fat Puppy can."
Swish went the red thing down the long green hill.
Swish, swish went Fat Puppy and Little Rabbit down the hill after it.
Sleepy Cat saw him running after the pretty red thing.
She thought, "That red thing must be something good to eat.
Maybe I can get it in a hurry."
In no time at all the animals were down the hill.
Fat Puppy had the pretty red thing.
"Well!" said Sleepy Cat.
"Look at that!"
"Dear me!" said Little Rabbit.
"Why did we run after that?
Why did we run all the way down the hill after a ball?"

Comprehension Questions

1. Who chased the "red thing" down the hill? dog, bunny, cat
2. What did the animals think the "red thing" might be? might be something to eat
3. What was the "red thing?" red ball
4. Why do you think the Fat Puppy chased the ball? to play with it



TSS - RED

FOUNTAIN VALLEY READING SKILLS EXERCISES

Phonetic Analysis Part 6

Name JACK SMITH

Date OCTOBER 10

that old shirt

▼

1. start [✓ first] trip
2. [✓ right] green frog
3. cars [✓ cross] corners
4. for [✓ farm] friends
5. animals know [✓ when]
6. luck [✓ could] quit
7. can chase [✓ cats]
8. with this [✓ word]
9. take his [✓ things]

★

1. children [✓ cats] sheep
2. [✓ your] them write
3. brown ground [✓ morning]
4. trade [✓ turtle] shirt
5. from [✓ four] three
6. [✓ then] knew keen
7. duck can [✓ quack]
8. park cry [✓ grow]
9. [✓ think] saw far

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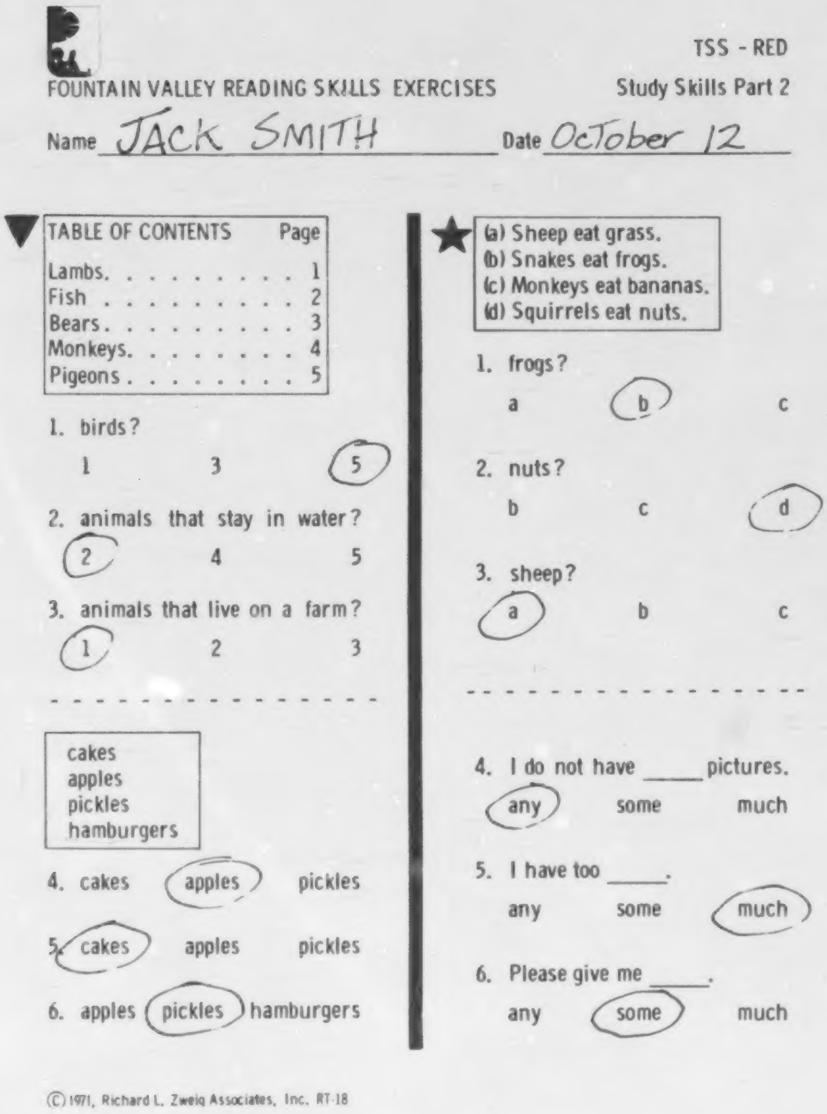
Plate 23.8 JACK SMITH'S SELF SCORING WORKSHEET FOR PHONETIC ANALYSIS

The student will demonstrate proficiency in WORD ANALYSIS/PHONETIC ANALYSIS by recognizing initial blends and digraphs tr (1-45), gr (1-46), cr (1-47), fr (1-48), ch (1-50), kn (1-51), th (voiced) (1-52), th (unvoiced) (1-53) and phonetic part qu (1-49).

SCORING INSTRUCTIONS	At Each Skill Level
Proceed	-0
Reteach	-1
# of Items	(2)

1.	1-50h	[✓ 1-50]	+
2.	1-52	+	[✓ 1-52]
3.	[✓ 1-46]	+	1-46
4.	1-45a	[✓ 1-45a]	+
5.	1-48d	[✓ 1-48a]	+
6.	1-51	+	[✓ 1-51]
7.	[✓ +]	1-49	1-49
8.	[✓ 1-47]	+	1-47a
9.	1-53d	1-53i	[✓ +]

1.	+	[✓ 1-45]	1-45a
2.	1-46a	+	[✓ 1-46]
3.	1-47a	[✓ +]	1-47a
4.	+	[✓ 1-48a]	1-48a
5.	[✓ 1-51]	+	1-51
6.	+	[✓ 1-49]	1-49
7.	[✓ 1-50]	+	1-50
8.	[✓ 1-52]	+	1-52a
9.	[✓ +]	1-53	1-53



FOUNTAIN VALLEY READING SKILLS EXERCISES

TSS - RED
Study Skills Part 2

Name JACK SMITH Date October 12

▼

TABLE OF CONTENTS	Page
Lambs.	1
Fish	2
Bears.	3
Monkeys.	4
Pigeons	5

1. birds?
   1 3 [✓ 5]
2. animals that stay in water?
   [✓ 2] 4 5
3. animals that live on a farm?
   [✓ 1] 2 3

- - - - - - - - - - - - - - -

cakes
apples
pickles
hamburgers

4. cakes [✓ apples] pickles
5. [✓ cakes] apples pickles
6. apples [✓ pickles] hamburgers

★

(a) Sheep eat grass.
(b) Snakes eat frogs.
(c) Monkeys eat bananas.
(d) Squirrels eat nuts.

1. frogs?
   a [✓ b] c
2. nuts?
   b c [✓ d]
3. sheep?
   [✓ a] b c

- - - - - - - - - - - - - - -

4. I do not have _____ pictures.
   [✓ any] some much
5. I have too _____.
   any some [✓ much]
6. Please give me _____.
   any [✓ some] much

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Plate 23.9 JACK SMITH'S SELF SCORING WORKSHEET
FOR STUDY SKILLS

The student will demonstrate proficiency in these STUDY SKILLS: using a table of contents (1-1), alphabetizing (1-2), skimming or rereading for specific information (1-3), and selecting the appropriate word for context (1-4).

SCORING INSTRUCTIONS

	1-1	1-2	1-3	1-4
Proceed	-0	-0	-0	-0
Reteach	-1	-1	-1	-1
# of Items	(3)	(3)	(3)	(3)

1. 1-3 [✓ +] 1-3
2. [✓ +] 1-3 1-3
3. 1-3 1-3 [✓ +]

4. 1-4 1-4 [✓ +]
5. [✓ +] 1-4 1-4
6. 1-4 [✓ +] 1-4

1. [✓ +] 1-1 1-1
2. 1-1 1-1 [✓ +]
3. 1-1 1-1 [✓ +]

4. 1-2 [✓ +] 1-2
5. 1-2 1-2 [✓ +]
6. 1-2 [✓ +] 1-2

Ginn and Company: Reading 360, 1970

TEACHING ALTERNATIVES - Word Analysis/Phonetic Analysis

	RETEACH	BOOK	PAGE
p-1.	initial consonant 'b'	- My Sound and Word Book	- T33
p-2.	initial consonant 'c'	- My Sound and Word Book	- T73
p-3.	initial consonant 'd'	- My Sound and Word Book	- T117
p-4.	initial consonant 'f'	- My Sound and Word Book	- T98
p-5.	initial consonant 'g'	- My Sound and Word Book	- T149
p-6.	initial consonant 'h'	- My Sound and Word Book	- T53
p-7.	initial consonant 'j'	- My Sound and Word Book	- T57
p-8.	initial consonant 'l'	- My Sound and Word Book	- T37
p-9.	initial consonant 'm'	- My Sound and Word Book	- T81
p-10.	initial consonant 'n'	- My Sound and Word Book	- T94
p-11.	initial consonant 'p'	- My Sound and Word Book	- T145
p-12.	initial consonant 'r'	- My Sound and Word Book	- T40
p-13.	initial consonant 's'	- My Sound and Word Book	- T131
p-14.	initial consonant 't'	- My Sound and Word Book	- T113
p-15.	initial consonant 'w'	- My Sound and Word Book	- T147
p-16.	initial consonant 'y'	- My Sound and Word Book	- T161
p-17.	initial digraph 'sh'	- May I Come In?	- T217
p-18.	initial digraph 'wh'	- May I Come In?	- T191
1-1.	final consonant 'd'	- A Duck is a Duck	- T51
1-2.	final consonant 'k'	- A Duck is a Duck	- T60
1-3.	final consonant 'l'	- A Duck is a Duck	- T108
1-4.	final consonant 'm'	- A Duck is a Duck	- T74
1-5.	final consonant 'n'	- A Duck is a Duck	- T74
1-6.	final consonant 'p'	- A Duck is a Duck	- T50
1-7.	final consonant 'r'	- A Duck is a Duck	- T99
1-8.	final consonant 't'	- A Duck is a Duck	- T51
1-9.	final consonant 'x'	- May I Come In?	- T169
1-10.	final phonetic part 'st'	- Seven is Magic	- T154
1-11.	final phonetic part 'ng'	- No prescription	
1-12.	final phonetic part 'ch'	- Seven is Magic	- T260
1-13.	final phonetic part 'ck'	- A Duck is a Duck	- T60
1-14.	final phonetic part 'll'	- A Duck is a Duck	- T109
1-15.	short vowel 'a'	- May I Come In?	- T37
1-16.	short vowel 'e'	- Helicopters and Gingerbread	- T231
1-17.	short vowel 'i'	- A Duck is a Duck	- T83
1-18.	short vowel 'o'	- Seven is Magic	- T99
1-19.	short vowel 'u'	- Seven is Magic	- T154
1-20.	long vowel 'a'	- May I Come In?	- T136

Plate 23.10

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 84

Ginn and Company: Reading 360, 1970

TEACHING ALTERNATIVES - Word Analysis/Phonetic Analysis (cont.)

RETEACH	BOOK	PAGE
1-21. long vowel 'e'	- Helicopters and Gingerbread	- T211
1-22. long vowel 'i'	- A Duck is a Duck	- T73
1-23. long vowel 'o'	- Seven is Magic	- T193
1-24. long vowel 'u'	- All Sorts of Things (3)	- T154
1-25. regular vowel combination 'ee'	- Helicopters and Gingerbread	- T211
1-26. regular vowel combination 'ay'	- May I Come In?	- T142
1-27. 'y' as a vowel	- The Dog Next Door (2)	- T359
1-28. irregular vowel combination 'ow'	- The Dog Next Door (2)	- T119
1-29. irregular vowel combination 'ōw'	- The Dog Next Door (2)	- T143
1-30. irregular vowel combination 'ew'	- How It is Nowadays (2)	- T61
1-31. murmur diphthong 'ar'	- Seven is Magic	- T204
1-32. murmur diphthong 'er'	- The Dog Next Door (2)	- T143
1-33. murmur diphthong 'ir'	- The Dog Next Door (2)	- T254
1-34. murmur diphthong 'ur'	- The Dog Next Door (2)	- T235
1-35. initial consonant 'k'	- A Duck is a Duck	- T60
1-36. initial blend 'sp'	- How It is Nowadays (2)	- T92
1-37. initial blend 'st'	- May I Come In?	- T200
1-38. initial blend 'sl'	- The Dog Next Door (2)	- T155
1-39. initial blend 'sm'	- Seven is Magic	- T81
1-40. initial blend 'sw'	- How It is Nowadays (2)	- T182
1-41. initial blend 'spr'	- How It is Nowadays (2)	- T172
1-42. initial blend 'fl'	- The Dog Next Door (2)	- T130
1-43. initial blend 'bl'	- Seven is Magic	- T204
1-44. initial blend 'cl'	- The Dog Next Door (2)	- T279
1-45. initial blend 'tr'	- May I Come In?	- T64
1-46. initial blend 'gr'	- May I Come In?	- T234
1-47. initial blend 'cr'	- The Dog Next Door (2)	- T111
1-48. initial blend 'fr'	- May I Come In?	- T209
1-49. phonetic part 'qu'	- May I Come In?	- T135
1-50. initial digraph 'ch'	- Seven is Magic	- T77
1-51. initial digraph 'kn'	- The Dog Next Door (2)	- T255
1-52 initial digraph 'th' (voiced)	- May I Come In?	- T241
1-53 initial digraph 'th' (unvoiced)	- May I Come In?	- T83

Plate 23.11

Ginn and Company: Reading 360, 1970

TEACHING ALTERNATIVES - Word Analysis/Structural Analysis

	RETEACH	BOOK	PAGE
p-1.	noun form 's'	- A Duck is a Duck	- T120
p-2.	noun form 'es'	- May I Come In?	- T110
p-3.	verb form 's'	- A Duck is a Duck	- T120
p-4.	verb form 'ed'	- May I Come In?	- T96
p-5.	verb form 'ing'	- May I Come In?	- T37
p-6.	compound words	- Seven is Magic	- T38
p-7.	rhyming words	- A Duck is a Duck	- T101
1-1.	adverbial suffix 'ly'	- The Dog Next Door (2)	- T328
1-2.	noun suffix 'er'	- The Dog Next Door (2)	- T188
1-3.	possessive form ' 's'	- May I Come In?	- T109
1-4.	adjective form 'er'	- The Dog Next Door (2)	- T143
1-5.	adjective form 'est'	- The Dog Next Door (2)	- T265
1-6.	compound words	- Seven is Magic	- T170

TEACHING ALTERNATIVES - Vocabulary Development

	RETEACH	BOOK	PAGE
p-1.	recognizing unknown through pictures	- My Sound and Word Book	- T178
p-2.	antonyms	- Seven is Magic	- T134
p-3.	rhyming words	- A Duck is a Duck	- T101
1-1.	recognizing unknown through context	- Seven is Magic	- T93
1-2.	identifying words through definition and sentence	- Seven is Magic	- T93
1-3.	how, where, when, who and what	- Seven is Magic	- T108
1-4.	antonyms	- Seven is Magic	- T134
1-5.	homonyms	- No prescription	
1-6.	synonyms and synonymous phrases	- Seven is Magic	- T100
1-7.	rhyming words	- A Duck is a Duck	- T101

TEACHING ALTERNATIVES - Comprehension

	RETEACH	BOOK	PAGE
p-1.	main idea-pictures	- My Sound and Word Book	- T178
p-2.	main idea-illustrating	- A Duck is a Duck	- T102
p-3.	main idea-rephrasing	- May I Come In?	- T175

Plate 23.12

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 86

Ginn and Company: Reading 360, 1970

TEACHING ALTERNATIVES - Comprehension (cont.)

	RETEACH	BOOK	PAGE
1-1.	main idea-pictures	- My Sound and Word Book	- T178
1-2.	main idea-supporting ideas	- May I Come In?	- T111
1-3.	main idea-illustrating	- The Dog Next Door (2)	- T291
1-4.	main idea-rephrasing	- May I Come In?	- T175
1-5.	main idea-titling	- May I Come In?	- T201
1-6.	sequence in pictures	- My Sound and Word Book	- T142
1-7.	arranging sentences-sequence	- Seven is Magic	- T100
1-8.	arranging events and ideas-sequence	- Seven is Magic	- T194
1-9.	matching pictures with text	- My Sound and Word Book	- T63
1-10.	answering questions-key words	- Seven is Magic	- T101
1-11.	identifying speaker, etc.	- Seven is Magic	- T70
1-12.	likeness and difference	- May I Come In?	- T58
1-13.	creative reading-reacting personally	- Seven is Magic	- T275
1-14.	recognizing tone, feeling, sadness	- Seven is Magic	- T45
1-15.	comparing and contrasting-ideas	- Seven is Magic	- T108
1-16.	drawing conclusions	- Seven is Magic	- T180
1-17.	inferences	- Seven is Magic	- T318

TEACHING ALTERNATIVES - Study Skills

	RETEACH	BOOK	PAGE
p-1.	table of contents	- A Duck is a Duck	- T39
p-2.	skimming or rereading-specific information	- A Duck is a Duck	- T71
p-3.	appropriate word for context	- May I Come In?	- T75
1-1.	table of contents	- A Duck is a Duck	- T39
1-2.	alphabetical sequence	- Seven is Magic	- T157
1-3.	skimming or rereading-specific information	- Seven is Magic	- T79
1-4.	appropriate word for context	- May I Come In?	- T175
1-5.	sources	- Helicopters and Gingerbread	- T188
1-6.	generalization from facts	- The Dog Next Door (2)	- T43
1-7	following directions	May I Come In?	- T97
1-8.	classifying-words and pictures	- May I Come In?	- 144

Plate 23.13

FVTSS TEACHING ALTERNATIVES SUPPLEMENT

p. 87

Scott, Foresman & Company: The New Basic Readers, 1963, 1965

TEACHING ALTERNATIVES - Word Analysis/Phonetic Analysis

RETEACH	BOOK		PAGE
p-1. initial consonant 'b'	- Fun With Our Friends	-	T49
p-2. initial consonant 'c'	- Fun Wherever We Are (P)	-	T146
p-3. initial consonant 'd'	- Fun With Our Family (P)	-	T71
p-4. initial consonant 'f'	- Fun With Our Friends	-	T49
p-5. initial consonant 'g'	- Fun With Our Friends	-	T58
p-6. initial consonant 'h'	- Fun With Our Family (P)	-	T102
p-7. initial consonant 'j'	- Fun With Our Friends	-	T146
p-8. initial consonant 'l'	- Fun Wherever We Are (P)	-	T165
p-9. initial consonant 'm'	- Fun With Our Friends	-	T44
p-10. initial consonant 'n'	- Fun With Our Friends	-	T43
p-11. initial consonant 'p'	- Fun With Our Friends	-	T49
p-12. initial consonant 'r'	- Fun With Our Friends	-	T92
p-13. initial consonant 's'	- More Fun With Our Friends (1)	-	T114
p-14. initial consonant 't'	- Fun With Our Friends	-	T68
p-15. initial consonant 'w'	- Fun With Our Friends	-	T134
p-16. initial consonant 'y'	- More Fun With Our Friends (1)	-	T101
p-17. initial digraph 'sh'	- More Fun With Our Friends (1)	-	T174
p-18. initial digraph 'wh'	- Fun With Our Friends	-	T32
1-1. final consonant 'd'	- More Fun With Our Friends	-	T180
1-2. final consonant 'k'	- More Fun With Our Friends	-	T85
1-3. final consonant 'l'	- More Fun With Our Friends	-	T180
1-4. final consonant 'm'	- More Fun With Our Friends	-	T180
1-5. final consonant 'n'	- More Fun With Our Friends	-	T150
1-6. final consonant 'p'	- More Fun With Our Friends	-	T150
1-7. final consonant 'r'	- Fun With Our Friends (P)	-	T93

Plate 23.14

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 200

Scott, Foresman & Company: The New Basic Readers, 1963, 1965

TEACHING ALTERNATIVES - Word Analysis/Phonetic Analysis (cont.)

	RETEACH	BOOK	PAGE
1-8.	final consonant 't'	More Fun With Our Friends	T150
1-9.	final consonant 'x'	No prescription	
1-10.	final phonetic part 'st'	More Fun With Our Friends	T205
1-11.	final phonetic part 'ng'	Friends Old and New (2)	T79
1-12.	final phonetic part 'ch'	More Fun With Our Friends	T75
1-13.	final phonetic part 'ck'	More Fun With Our Friends	T185
1-14.	final phonetic part 'll'	More Fun With Our Friends	T39
1-15.	short vowel 'a'	Friends Old and New (2)	T97
1-16.	short vowel 'e'	Friends Old and New (2)	T107
1-17.	short vowel 'i'	Friends Old and New (2)	T57
1-18.	short vowel 'o'	Friends Old and New (2)	T136
1-19.	short vowel 'u'	Friends Old and New (2)	T162
1-20.	long vowel 'a'	Friends Old and New (2)	T97
1-21.	long vowel 'e'	Friends Old and New (2)	T107
1-22.	long vowel 'i'	Friends Old and New (2)	T57
1-23.	long vowel 'o'	Friends Old and New (2)	T136
1-24.	long vowel 'u'	Friends Old and New (2)	T162
1-25.	regular vowel combination 'ee'	No prescription	
1-26.	regular vowel combination 'ay'	No prescription	
1-27.	'y' as a vowel	Roads To Follow (3)	T98
1-28.	irregular vowel combination 'ow'	More Friends Old and New (2)	T116
1-29.	irregular vowel combination 'ōw'	More Friends Old and New (2)	T117

Plate 23.15

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 201

Scott, Foresman & Company: The New Basic Readers, 1963, 1965

TEACHING ALTERNATIVES - Word Analysis/Phonetic Analysis (cont.)

RETEACH	BOOK		PAGE
1-30. irregular vowel combination 'ew'	- More Friends Old and New (2)	-	T195
1-31. murmur diphthong 'ar'	- Friends Old and New (2)	-	T101
1-32. murmur diphthong 'er'	- Friends Old and New (2)	-	T117
1-33. murmur diphthong 'ir'	- Friends Old and New (2)	-	T64
1-34. murmur diphthong 'ur'	- Friends Old and New (2)	-	T163
1-35. initial consonant 'k'	- More Fun With Our Friends	-	T85
1-36. initial blend 'sp'	- More Fun With Our Friends	-	T115
1-37. initial blend 'st'	- More Fun With Our Friends	-	T115
1-38. initial blend 'sl'	- More Fun With Our Friends	-	T115
1-39. initial blend 'sm'	- More Fun With Our Friends	-	T204
1-40. initial blend 'sw'	- More Fun With Our Friends	-	T204
1-41. initial blend 'spr'	- No prescription		
1-42. initial blend 'fl'	- No prescription		
1-43. initial blend 'bl'	- More Fun With Our Friends	-	T131
1-44. initial blend 'cl'	- More Fun With Our Friends	-	T131
1-45. initial blend 'tr'	- More Fun With Our Friends	-	T119
1-46. initial blend 'gr'	- More Fun With Our Friends	-	T120
1-47. initial blend 'cr'	- No prescription		
1-48. initial blend 'fr'	- More Fun With Our Friends	-	T120
1-49. phonetic part 'qu'	- Roads To Follow (3)	-	T129
1-50. initial digraph 'ch'	- More Fun With Our Friends	-	T74
1-51. initial digraph 'kn'	- No prescription		

Plate 23.16

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 202

Scott, Foresman & Company: The New Basic Readers, 1963, 1965

TEACHING ALTERNATIVES - Word Analysis/Phonetic Analysis (cont.)

RETEACH	BOOK		PAGE
1-52. initial digraph 'th' (voiced)	- More Fun With Our Friends	-	T96
1-53. initial digraph 'th' (unvoiced)	- More Fun With Our Friends	-	T96

TEACHING ALTERNATIVES - Word Analysis/Structural Analysis

RETEACH	BOOK		PAGE
p-1. noun form 's'	- Fun With Our Friends	-	T196
p-2. noun form 'es'	- No prescription		
p-3. verb form 's'	- More Fun With Our Friends (1)	-	T57
p-4. verb form 'ed'	- Fun With Our Friends	-	T170
p-5. verb form 'ing'	- Fun With Our Friends	-	T183
p-6. compound words	- More Fun With Our Friends (1)	-	T27
p-7. rhyming words	- Fun With Our Friends	-	T217
1-1. adverbial suffix 'ly'	- More Friends Old and New (2)	-	T61
1-2. noun suffix 'er'	- Friends Old and New (2)	-	T126
1-3. possessive form ' 's '	- More Fun With Our Friends	-	T66
1-4. adjective form 'er'	- More Fun With Our Friends	-	T196
1-5. adjective form 'est'	- Friends Old and New (2)	-	T130
1-6. compound words	- More Fun With Our Friends	-	T27

Plate 23.17

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 203

Scott, Foresman & Company: The New Basic Readers, 1963, 1965

TEACHING ALTERNATIVES - Vocabulary Development

RETEACH	BOOK	PAGE
p-1. recognizing unknown through pictures	- Fun With Our Friends	- T80
p-2. antonyms	- No prescription	
p-3. rhyming words	- Fun With Our Friends	- T217
1-1. recognizing unknown through context	- More Fun With Our Friends	- T63
1-2. identifying words through definition and sentence	- More Fun With Our Friends	- T37
1-3. how, where, when, who and what	- More Fun With Our Friends	- T155
1-4. antonyms	- No prescription	
1-5. homonyms	- No prescription	
1-6. synonyms and synonymous phrases	- No prescription	
1-7. rhyming words	- More Fun With Our Friends	- T174

TEACHING ALTERNATIVES - Comprehension

RETEACH	BOOK	PAGE
p-1. main idea-pictures	- Fun With Our Friends	- T46
p-2. main idea-illustrating	- No prescription	
p-3. main idea-rephrasing	- No prescription	
1-1. main idea-pictures	- More Fun With Our Friends	- T177
1-2. main idea-supporting ideas	- More Fun With Our Friends	- T113
1-3. main idea-illustrating	- No prescription	
1-4. main idea-rephrasing	- More Fun With Our Friends	- T100
1-5. main idea-titling	- No prescription	
1-6. sequence in pictures	- No prescription	
1-7. arranging sentences-sequence	- Friends Old and New (2)	- T79
1-8. arranging events and ideas-sequence	- More Fun With Our Friends	- T50
1-9. matching picture with text	- Fun With Our Family (P)	- T37

Plate 23.18

FVTSS TEACHING ALTERNATIVES SUPPLEMENT
p. 204

Scott, Foresman & Company: The New Basic Readers, 1963 1965

TEACHING ALTERNATIVES - Comprehension (cont.)

	RETEACH	BOOK	PAGE
1-10.	answering questions-key words	- Fun With Our Friends (P)	- T37
1-11.	identifying speaker, etc.	- Fun With Our Friends (P)	- T108
1-12.	likeness and difference	- No prescription	
1-13.	creative reading-reacting personally	- No prescription	
1-14.	recognizing tone, feeling, sadness	- More Fun With Our Friends	- T221
1-15.	comparing and contrasting-ideas	- More Fun With Our Friends	- T172
1-16.	drawing conclusions	- More Fun With Our Friends	- T43
1-17.	inferences	- More Fun With Our Friends	- T30

TEACHING ALTERNATIVES - Study Skills

	RETEACH	BOOK	PAGE
p-1.	table of contents	- Fun With Our Friends	- T26
p-2.	skimming or rereading-specific information	- No prescription	
p-3.	appropriate word for context	- Fun Wherever We Are (P)	- T172
1-1.	table of contents	- More Fun With Our Friends	- T22
1-2.	alphabetical sequence	- More Friends Old and New (2)	- T55
1-3.	skimming or rereading-specific information	- More Friends Old and - New (2)	- T51
1-4.	appropriate word for context	- More Fun With Our Friends	- T135
1-5.	sources	- No prescription	
1-6.	generalization from facts	- No prescription	
1-7.	following directions	- No prescription	
1-8.	classifying-words and pictures	- More Fun With Our Friends	- T45

Plate 23.19

Plate 23.20

BASAL READING SERIES

The following series and readers are used in on-line material:

The New Basic Readers,
Scott Foresman & Co., New York, 1965.

Pre-primers	1 –	*Judy, John and Jean*
	2 –	*Fun With Our Family*
	3 –	*Fun Wherever We Are*
Primer	1-1 –	*Fun With Our Friends*
First Reader	1-2 –	*More Fun With Our Friends*
Second Readers	2-1 –	*Friends Old and New*
	2-2 –	*More Friends Old and New*

Reading 360,
Ginn and Company, Boston, 1969.

360 Levels		Approximate Grade Level
1 –	*Learning About Sounds*	
2 –	*My Sound and Word Book*	
3 –	*A Duck is a Duck*	Pre-primer
4 –	*Helicopters and Gingerbread*	Pre-primer
5 –	*May I Come In?*	Primer
6 –	*Seven Is Magic*	First Reader
7 –	*The Dog Next Door*	Second Reader 2-1
8 –	*How It Is Nowadays*	Second Reader 2-2
9 –	*With Skies and Wings*	Third Reader 3-1
10 –	*All Sorts of Things*	Third Reader 3-1

BASAL READING SERIES
(REPRESENTATIVE EXAMPLES)

Sounds of Language by Bill Martin, Jr.	Holt, Rinehart and Winston, Inc., New York, 1966
The Bank Street Reading Series	MacMillan Co., New York, 1966.
Basic Reading by Charles C. Walcutt	J. P. Lippincott Co., New York, 1965.
Scott Foresman Reading Systems	Scott Foresman, New York, 1971.
The Harper and Row Basic Reading Program	Harper and Row, New York, 1966.
The Holt Basic Reading System	Holt, Rinehart and Winston, New York, 1973.
The READ Series	American Book Co., New York, 1968.

Plate 23.21

SUPPLEMENTS TO THE BASAL READER (SOME REPRESENTATIVE EXAMPLES)

Word or letter games

See Taylor, Frank D., et al., in'di·vid'u·al·ized read'ing in-struc-tion, games and activities, 1972: Love Publishing Company, Denver.

Phonics kits or workbooks

The New Phonics We Use, Chicago: Lyons and Carnahan, 1972.
Rolling Readers, Linguistic Book Series, Glenview, Illinois: Scott Foresman and Co.
A Modern Linguistic Approach to Reading, Cleveland, Ohio: Modern Curriculum Press, Inc.
Speech-to-Print Phonics, New York: Harcourt, Brace and World, Inc., 1964.
Distar Reading, SRA, 1971.
Flash cards with sight words accompany most basal series or can be teacher- or student-made.

Word attack worksheets

These accompany most basal series or they may be teacher-made.

Rate builders

Reader's Digest skill builders
SRA Reading Laboratory IIa, b, c. (gr. 3–8), Ia, b, c. (gr. 1–3), SRA, Chicago, 1960.

Programmed skills kits

Specific Skills Series, Barnell, Loft, Ltd., New York.
Spectrum of Skills, MacMillan Co., New York, 1965.
Programmed Reading, Sullivan Associates, McGraw Hill Book Co., St. Louis, 1963.
Instructional Aid Kits, Dexter and Westbrook, Ltd., Rockville Centre, New York, 1967

Enrichment series

Curriculum Enrichment Series, Lyons and Carnahan, Chicago, 1965.
(*Up and Away* is the First Grade Enrichment Reader in this series.)
Pictures to Read, Let's Look, others in series, Chandler Publishing Co., San Francisco.
The Open Highways Readers, Scott, Foresman, New York, 1965.
The Wide Horizons Readers, Scott, Foresman, New York, 1966.
How To Read in the Subject-Matter Areas, The Harper and Row Basic Reading Program, Harper and Row, New York, 1966.
Reading Caravan, D. C. Heath and Co., Boston, 1964.
The Wonder-Story Books, Harper and Row, Evanston, 1962.

And many, many trade books.

REFERENCES

Chapter 23

Reading

Source Materials
Texts on Elementary Reading

DUFFY, G. G. and SHEEMAN, G. B. *How to teach reading systematically*. New York: Harper and Row, 1973.

GUSZAK, F. J. *Diagnostic reading instruction in the elementary school*. New York: Harper and Row, 1972.

HAFNER, L. E. and JOLLY, H. B. *Patterns of teaching reading in the elementary school*. New York: Macmillan, 1972.

HEILMAN, A. W. *Principles and practices of teaching reading*. Third Edition, Columbus, Ohio: Charles E. Merrill Co., 1972.

Best General text in Reading

SPACHE, G. D. and SPACHE, Evelyn B. *Reading in the elementary school*. Third Edition, Boston: Allyn and Bacon, 1973.

STAUFFER, R. G. *Teaching reading as a thinking process*. New York: Harper and Row, 1969.

WALLEN, C. J. *Competency in teaching reading*. Chicago: Science Research Associates, 1972.

Text in Teaching the Language Arts

LAMB, P. *Guiding children's language learning*. Second Edition, Dubuque: William C. Brown Co., 1971.

PETTY, W. T., PETTY, Dorothy C., BECKING, Marjorie F. *Experiences in language, tools and techniques for language arts methods*. Boston: Allyn and Bacon, 1973.

SMITH, J. A. *Adventures in communication: Language arts methods*. Boston: Allyn and Bacon, 1972.

SMITH, J. A. *Creative teaching of the language arts in the elementary schools*. Second Edition, Boston: Allyn and Bacon, 1973.

Texts in Related Areas

LAFFEY, J. L. (Ed.). *Reading in the content areas*. Newark, Delaware: International Reading Association, 1972.

FRIES, C. C. *Linguistics and reading*. New York: Holt, Rinehart and Winston, Inc., 1963.

HERBER, H. L. *Teaching reading in content areas*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1970.

JOHNSON, Marjorie S. and KRESS, R. A. *Informal reading inventories*. Newark, Delaware: International Reading Association, 1965.

SMITH, F. *Understanding reading*. New York: Holt, Rinehart and Winston, 1971.

Materials Used in Chapter

OUSLEY, O. and RUSSELL, D. H. The little white house (pp. 165-166) and My little red story book (p. 21) of *The Ginn Basic Readers*, 100 Edition, Copyright, 1966, 1964, 1961, 1957, 1953, 1948, by Ginn and Company. Used with permission.

LEE, J. The Informal Reading Inventory used in this chapter was prepared by Mrs. Joyce Lee, Reading Center, The Pennsylvania State University.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

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Application of the Diagnostic Teaching Model VII

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- CHAPTER 22. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO LANGUAGE DEVELOPMENT
- CHAPTER 23. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO READING
- CHAPTER 24. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MATHEMATICS is a presentation of basic mathematical concepts as a means of communicating the quantitative dimensions of the environment.
  - Goals include developing mathematical concepts and a quantitative vocabulary, teaching computational skills, and providing opportunities for problem solving.
  - At the preschool level, the development of mathematical concepts and vocabulary used should be stressed (classification, seriation, spatial relationships, and measurement).
  - At the primary level, the learning of computation should be stressed (addition, subtraction, multiplication, division, geometry, and fractions).
  - The four diagnostic approaches to mathematics are standardized tests, teacher-made tests, observation, and clinical interviews.
  - The interactive model for teaching specifies the teacher's input and the student's output for an objective.
- CHAPTER 25. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO SOCIAL AND EMOTIONAL DEVELOPMENT
- CHAPTER 26. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MOTOR DEVELOPMENT

CHAPTER TWENTY-FOUR

MATHEMATICS

Mathematics is a form of language which is used to communicate the quantitative dimensions of the environment

The goals of a comprehensive mathematics program should be to further the development of this language by 1) developing mathematical concepts and a quantitative vocabulary, 2) teaching computational skills, and 3) providing opportunities for problem solving in order that this language become functional. The development of mathematical skills and quantitative concepts is necessary for problem-solving

A distinction is made between mathematical concepts and skills. Mathematical *concepts* refer to the development of understandings in the areas of number, measurement, and geometry; whereas mathematical (or correctly, arithmetical) *skills* refer to the learning of algorithms which perform various computational operations (addition, subtraction, etc.) with numerals. For these computations to be meaningful and correctly applied, there must be prerequisite understanding of the mathematical concepts which these symbols (numerals or words such as more and less) signify. Therefore, it is suggested that at the preschool level the development of mathematical concepts and vocabulary be stressed and the learning of computation be reserved for the primary level.

Preprimary Level

The understanding of the concept of number has these prerequisites:

1 Understanding that number is a property of a set, which is the placement of an object in a particular location

2 Understanding that numbers can be sequentially arranged.

3 Understanding that the number of a set does not change with the arrangement of the element of the set.

Learning experiences in *classification* and *seriation* further the development of the concept of number

Classification Classification activities help develop the concept of a set. They involve the sorting and grouping of physical objects according to attributes like color, shape, size Classification gives the child the opportunity to impose a logical system on things, thus understanding number as an abstract attribute of sets

The ability to abstract the number property from a set of objects is the *terminal goal* of learning activities in classification. When a child understands a "one to one correspondence," he has acquired the ability to demonstrate *equivalency*. The child who understands that the number property of a set remains the same no matter how the objects are arranged grasps *conservation of number*. Once the child comprehends the abstract number property, instruction in associating the numerical name to the set begins. As a result, the child learns the *cardinality* or "how maniness" of a set.

Finally, classification activities also build the child's vocabulary. He learns quantitative terms to express quantitative relationships.

Seriation. Activities in which the child is asked to put objects into a series on the basis of some attribute in order to develop the idea of the ordering of differences is called seriation.

The goals of seriation include teaching ordinal position or the position an object occupies in a given series; teaching rational or meaningful counting, counting done by a child who understands that when he counts each number is increased by one; and developing a quantitative vocabulary.

Spatial relationships. Spatial relationships at the preprimary level should include the understanding of these concepts and terms: near-far; on-off; top-bottom; above-underneath; right-left; inside-outside. These are best taught through direct learning experiences. The art work of a child can be very useful in determining the child's grasp of spatial relationships.

Measurement. At this developmental stage a child's concept of linear measurement should include:

1. conservation of length — an object remains the same length, regardless of a change in position.
2. nonstandard units of measure
3. subdivision and repetition

Measuring objects which require the repetition of the nonstandard unit (that is, not an established unit of measure), leads to the development of the concept that an object's length can be subdivided into units determined by the measuring instrument. Later the standard unit of an inch on a ruler can be repeated in measuring the length of an object.

Primary Level

At the primary level emphasis shifts to the development of the computational skills, accompanied by an understanding of the operations on whole numbers.

Addition Addition is meaningful when a child understands that sets which have a number property can be unionized or put together It is a rote process, but it requires the child to comprehend:

1. The Commutative property that the order of the numbers added does not affect the sum.
2. The Associative property that in addition of more than two numbers, it makes no difference how the numbers are grouped.
3. Regrouping when adding multi-digit numbers the child must understand place and value

Using this skill in real and contrived verbal situations will not only teach the child *how* to add, but also *when* addition is required. He should be able to recognize what operation the problem requires for the solution. *Drill* is used as a teaching technique for addition only as a means of enabling the child to perform meaningful computation more quickly and efficiently.

Subtraction Subtraction involves taking one set away from the total set Since it is considered the reverse of addition, it is recommended that these two operations be taught simultaneously. Though the associative and commutative properties do not apply to subtraction, it is especially important that the child understand *place value* when subtracting multi-digit numbers.

Multiplication. Multiplication should be understood by the child as a special case of addition in which all the sets to be added are of an equal number of objects It has the same properties as addition. Commutative means that the order of the numbers multiplied does not change the value of the answer, and associative means that when more than two numbers are multiplied, the order in which they are multiplied does not affect the total. A clear understanding of renaming and place values is also necessary

Division Division of whole numbers is the inverse of the multiplication of whole numbers It divides the whole into a number of parts (objects). It can be related to subtraction because it may be considered as a series of repeated subtractions in which the number to be subtracted is the same. Like subtraction, it does not have commutative and associative properties.

Geometry At the primary level geometry focuses on the identification and description of three-dimensional and two-dimensional shapes. Up to this point the child has encountered a variety of three-dimensional shapes, but he has probably not learned their names. Sorting activities give children experience grouping, thus teaching them to recognize characteristics of shapes.

Instruction should center on similarities and differences between geometric shapes Activities should include counting corners or angles, counting edges, and counting sides

Fractions. Understanding fractions as parts of a group grows out of experiences in classification. At the primary level, the child should understand fractions dealing with halves, thirds and fourths.

Measurement. At the primary level the child should learn to understand and use instruments with standard units of measure. He should recognize that he now can express the quantitative relationship between two objects with more precision.

Linear measurement should develop the concept of an inch, a foot, and a yard, through the use of a ruler. The concepts of time, weight, temperature and money as units of measurement should also be taught.

Diagnostic Approaches in Mathematics

Four main approaches are used to determine abilities and disabilities in mathematics:

1. *The use of standardized tests.* These help the teacher determine the general standing of the child in comparison to his peers, but do not give enough information to pinpoint the child's specific difficulties.

2. *The use of teacher-made tests.* These should be used to determine specific pupil difficulties in order that an instructional program can be developed. The teacher must perform a task analysis of specific math tasks. The test should reduce more complex math skills or concepts into simpler components in order to determine the areas in which help is needed.

3. *The use of observation.* Observing the child while he is working can give information about considerable difficulties (at what point the student gets "stuck" or makes a basic error).

4. *The use of the clinical interview.* In the clinical interview the teacher questions the child to determine his understanding and level of abstraction. Rote learning is quite detectable here.

Approaches to Teaching Mathematics

The *interactive model* specifies general guidelines for teaching mathematics. This model specifies the mode of the teacher *input* (verbal, visual or motor) and the mode of the child *output* (verbal and motor; e.g. pointing). A total of six interactive arrangements can be specified.

Too many programs present mathematical content at the verbal level and require the child to respond at the verbal level. This is often inappropriate because the child may not have developed the prerequisite understandings at the visual and motor levels. The unfortunate result is often rote recitation with little understanding. Teachers may infer mistakenly that the child understands because he is dealing with numbers symbolically.

A developmental approach reflects the Diagnostic Teaching Model in that it requires that concepts be developed at the motor levels before mathematics is introduced at the verbal and visual levels. A developmental approach created by Dr. John F. Cawley for slow learners has broken down the development of mathematical skills and concepts into seven "strands": patterns, geometry, measurement, set identity, set operations, number operations, and fractions.

Some Specific Mathematics Programs

Nuffield Mathematics Program. This program stresses the development of mathematical concepts as prerequisites to computation. It holds that if the proper environment exists much of the child's learning can take place without direct teaching. The program can be described as relatively unstructured and highly experimental.

The Nuffield Program provides a series of books which suggest mathematical activities for preprimary and primary children beginning with motor activities and proceeding to verbal activities.

Stern's Structural Arithmetic Program. This program emphasizes the child's ability to discover number relationships through a highly structured visual approach. This discovery is prerequisite to addition and subtraction.

The program includes a set of materials and highly structured directions for their use. They provide a definite physical structure for the child to keep in mind as he learns number relationships emphasizing discovery, self-correction, and measurements rather than counting.

Cuisenaire Method of Numbers in Color. The main objective of this program is to teach the child to do rapid and accurate calculating. Experiences with colored rods are provided to build a conceptual understanding of the operations underlying calculations.

Distar – Arithmetic. (See Chapter 22 for information on Distar Language which should be used concurrently.) The point of view of this program is that children learn what they are taught. The program focuses on the development of computational skills and the solution of word problems. The program is highly structured and highly verbal. All tasks are stated in behavioral objectives.

Titles and publishers for several mathematics programs are given in Plate 24.1.

Plate 24.1

EXAMPLES OF ELEMENTARY MATHEMATICS SERIES PUBLISHERS

Addison-Wesley Publishing Company
Public School Division
Reading, Massachusetts

American Book Company
Public School Division
55 Fifth Avenue
New York, New York 10003

Ginn and Company
Public School Division
72 Fifth Avenue
New York, New York 10011

Holt, Rinehart and Winston
Public School Division
383 Madison Avenue
New York, New York 10017

Houghton Mifflin Company
Public School Division
2 Park Street
Boston, Massachusetts 02109

L. W. Singer Publishing Company
Public School Division
259 West Erie Boulevard
Syracuse, New York 13202

Laidlaw Brothers Publishers
Public School Division
Summit, New Jersey 07901

McGraw Hill Publishing Company
Public School Division
330 West Second Street
New York, New York 10036

Science Research Association
Public School Division
259 East Erie Street
Chicago, Illinois 60611

Scott, Foresman and Company
Public School Division
433 East Erie Street
Chicago, Illinois 60611

Silver Burdett Company
Public School Division
Morristown, New Jersey 07960

Summary

1. Mathematics is a language used to communicate the quantitative dimensions of the environment.
2. A comprehensive mathematic program should have three goals:
   a. developing mathematical concepts and a quantitative vocabulary
   b. teaching computational skills
   c. providing opportunities for problem-solving.
3. At the preprimary level the concepts of set, classification, seriation, spatial relationships, and measurement are taught.
4. At the primary level, the concepts of addition, subtraction, multiplication, and division, geometry, fractions, and measurement are presented.
5. The four main diagnostic approaches in mathematics are standardized tests, teacher-made tests, observations, and clinical interviews.
6. The interactive model for teaching specifies the mode of the teacher's input and the mode of the student's output for any given objective.

REFERENCES

Chapter 24

Mathematics

CAWLEY, J. F. and VITELLO, S. J. Model for arithmetical programming for handicapped children. *Exceptional Children*, 1972, 39, 101-110.

COPELAND, R. W. *How children learn mathematics*. New York: The Macmillan Company, 1970.

COPELAND, R. W. *Mathematics and the elementary teacher*. Philadelphia: W. B. Saunders Co., 1972.

ENGELMANN, S. and CARNINE, E. *Distar arithmetic: Teacher guide*. Chicago: Science Research Associates, 1970.

GATTEGNO, C. *For the teaching of elementary mathematics*. Mt. Vernon: Cuisenaire Company of America, 1963.

NUFFIELD, MATHEMATICS PROJECT. New York: John Wiley and Sons, Inc., 1970.

RIEDESEL, C. A. *Guiding discovery in elementary school mathematics*. New York: Appleton-Century-Crofts, 1967.

STERN, C. *Children discover arithmetic*. New York: Harper and Brothers, 1949.

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CHAPTER 22. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO LANGUAGE DEVELOPMENT

CHAPTER 23. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO READING

CHAPTER 24. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MATHEMATICS

CHAPTER 25. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO SOCIAL-EMOTIONAL DEVELOPMENT is a presentation of a program based on two premises: "The classroom is a laboratory for social-emotional development" and "How a child feels is more important than what he knows."

- The characteristics of the learner, the teacher, and the environment are all related to each other, and they all interact with each other in the teaching-learning process.
- A variety of procedures and activities can be used specifically to encourage and facilitate the teaching-learning process.
- Different inappropriate behaviors must occur frequently and be observed before the teacher can identify a child as one who is having social-emotional problems.

CHAPTER 26. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MOTOR DEVELOPMENT

CHAPTER TWENTY-FIVE

APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO SOCIAL-EMOTIONAL DEVELOPMENT

This chapter is based upon the following statement: "The classroom is a laboratory for social-emotional development." The classroom is a place where the children and the teacher can try out the day to day successes and failures of social living and emotional involvement. Whatever the child experiences in the classroom, he will learn to take with him outside the classroom. This chapter is also based upon this statement: "How a child feels is more important than what he knows." The way a child feels about *himself*, his *peers*, his *teacher*, and the classroom *environment* influences what and how much he will learn.

All the characteristics of the environment and the learner which facilitate the teaching-learning process *can be influenced by the teacher*. This is a very important concept: the teacher can manipulate the environment and his own behavior in such a way as to significantly influence the social-emotional behavior, feelings, and attitudes of the learner

In characteristic one, (Plate 25 1) the teacher can help the learner perceive the subject matter as having relevance to him by creating an environment in which pupils can discover the meaning of their ideas and where their ideas have personal value and significance. Procedures for doing this are outlined in this chapter.

The teacher can help the learner become more honest and open. Some characteristics of openness were presented in the Open-Education Chapter. Another characteristic or definition of openness refers to openness and honesty of feelings. (Characteristic four) A teacher can help his pupils to become more open and honest by being open and honest and real with his feelings.

In characteristic eight, the teacher encourages the learner to evaluate and criticize his own learning. Self-evaluation, peer-evaluation, and teacher-evaluation must all be used. Self-evaluation encourages independence, creativity, self-discovery, personal learning, competence and self-confidence.

An important characteristic of the teacher which facilitates the teaching-learning process and promotes the development of a healthy self-concept in the child is given in characteristic ten. To be sensitively understanding means the teacher puts himself in a child's shoes. It means to feel just how a child feels about himself and his environment. There are three steps in becoming sensitively understanding of children. To *want* to be

Plate 25.1

CHARACTERISTICS OF THE TEACHER, ENVIRONMENT AND LEARNER WHICH FACILITATE THE TEACHING-LEARNING PROCESS

TEACHER	ENVIRONMENT	LEARNER
1. Makes the subject matter *relevant* to the learner.	Subject matter is *relevant* to the learner.	Perceives subject matter as *relevant to him.*
2. Perceives children and environment as *non-threatening* to self.	Is *non-threatening* to the learner.	Perceives teacher, environment, and peers as *non-threatening* to his self.
3. Creates an environment which encourages the learner to be *active* and *doing* in the teaching-learning process.	Encourages learner to be *active* and *doing.*	Is *active* and *doing* in the teaching-learning process.
4. Is *honest* and *open.*	Conducive to *honest* and *open* interaction.	Is *honest* and *open.*
5. Interacts within the teaching-learning process both at the *intellectual* and *feeling* levels.	Encourages *intellectual* and *feeling* levels.	Interacts within the teaching-learning process both at the intellectual and *feeling* levels.
6. Feels *accepted,* involved, comfortable, respected, and competent within the teaching-learning process.	Promotes *acceptance.*	Feels *accepted,* involved, comfortable, respected and competent within the teaching-learning process.

TEACHER	ENVIRONMENT	LEARNER
7. Enters into *positive* and *cooperative* relationships with children.	Encourages *cooperative positive* relationships.	Enters into *positive cooperative* relationships with teacher and peers.
8. *Evaluates* himself and his own work.	Encourages *self-evaluation.*	*Evaluates* himself and his work.
9. Is accepting and *trusting* of children.	Creates atmosphere of *trust.*	
10. Is *sensitively understanding* of children.	Encourages *sensitive understanding.*	
11. Is *flexible.*	Promotes *flexibility.*	
12. *Plans* activities with children.	Encourages planning of activities with children and teacher.	
13. Accepts his own limitations.		

The characteristics of the learner, the teacher, and the environment are all related to each other, and they are all interacting with each other in the teaching-learning process.

sensitively understanding of children is the first step. But just to have the desire is not enough. Step two is taking the time and effort to create *an environment* within which the positive characteristics of learners and teachers are encouraged. The third step in becoming sensitively understanding is *listening* to and with children.

Characteristic eleven is being flexible with respect to one's role and the instructional goals. Flexibility means that the instructional goals are made according to the relevant characteristics of the child and that the instructional strategies are in accord with the instructional goals. Flexibility with respect to role is a bit different. This refers to the different roles that teachers should take on to best facilitate the teaching-learning process. Some of these roles are counselor, lecturer, and resource person.

Accepting one's own limitations, characteristic thirteen, is similar to accepting a child's limitations. Acceptance does not mean that one is satisfied with the limitations. It means that one is trying to *deal* with the limitations rather than denying them. *Denial* of learning one's limitations is in opposition to the facilitation of the teaching-learning process.

Plate 25 1 also shows the characteristics of the *environmment* which facilitate the teaching-learning process. Just as each teacher characteristic can influence the learner characteristic, each environmental characteristic is affected by the teacher characteristic and influences the learner characteristic. A comparison of the teacher characteristics with the environmental characteristics reveals that they are very similar. The characteristics of the teacher (with the exception of number thirteen) determine the characteristics of the environment since it is the teacher who can control the characteristics of the environment.

Procedures Which Facilitate Social-Emotional Development

The following is a list of several procedures which define and encourage the characteristics of the learner, teacher and environment, and facilitate the teaching-learning process.

The use of puppets to facilitate social-emotional development and the teaching-learning process Children should make the puppets and make up the characters which the puppets portray. The children should also make up the lines which the puppets speak in the play. Several behaviors are encouraged during the puppetry procedure: artistic work on the puppets, eye-hand (motor) coordination, and speech and language which are within the intellectual level, and the expression of needs, values and ideas which are within the feeling level

The use of dramatic play to facilitate social-emotional development and the teaching-learning process Dramatic play is a name which adults have attached to the spontaneous, unrehearsed, and nearly continuous role playing in which young children engage. The teacher must be careful to accept the speech, feelings, and behavior of dramatic play as derived from the roles which the children are trying on. This should also be kept in mind with puppetry, role playing and sociodrama.

The use of role playing or sociodrama to facilitate social-emotional development and the teaching-learning process In dramatic play the roles which the children play are spontaneous and unrehearsed. In role playing the roles are planned and may or may not be rehearsed. In sociodrama the roles are planned and rehearsed. Puppetry can be considered a special procedure within each of the above procedures. Socio drama is one of the best procedures for encouraging both the intellectual and feeling levels. The intellectual aspects are developing the lines to be spoken in the play and the making of the costumes and the props. The feeling aspects are the expression of needs, values, and ideas in the sociodrama.

The use of social-emotional discussion groups to facilitate social-emotional development and the teaching-learning process. A social-emotional discussion group is a group composed of the entire class sitting in a circle and discussing the social-emotional problems which occur from day to day in the classroom. The teacher should never criticize any child for his expression of feelings. Feelings should be accepted for their openness and honesty.

Another procedure is called "MY FEELINGS INSIDE OF ME." The steps of this procedure appear below.

"MY FEELINGS INSIDE OF ME"

1. Children pair off
2. One lies down on newsprint
3. Other traces his body.
4. Child who was traced now writes and/or paints on his outline how and/or what he feels inside
5. Child who traced adds how and/or what he thinks the other feels.
6. The two children discuss.
7. Process is repeated with children changing roles

Another procedure is called "PUT YOURSELF IN MY SHOES." The steps of this procedure appear below.

"PUT YOURSELF IN MY SHOES"

1. Children sit on floor in a circle.
2. Children number off, 1-2, 1-2, etc.
3. Each No. 1 asks a No. 2 to form a group of two.
4. Each group finds a place in the room where it can discuss.
5. Each child puts on the shoes of the other. He is told that he is now the other person.
6. The two children talk about who they are, how they feel, what they want, what they think.

Another procedure is called "TELL IT LIKE IT IS." The steps of this procedure appear below. This procedure should be used with older children only (ages 5 to 8).

"TELL IT LIKE IT IS."

1. Children and teacher sit in a circle.
2. One child volunteers to sit in the center of the circle.
3. He can now say anything he wants to anyone in the circle. He can choose only one person, and then that person takes his place and the process is repeated.

In all of these procedures, the teacher should be aware of the characteristics of the teacher which facilitate the teaching-learning process and encourage social-emotional development. The teacher should also be aware of the flexibility of each of these procedures and the need for sensitive understanding and listening in order to guide the process of learning which occurs during the procedures.

Social-Emotional Problems

Children who have social-emotional problems are identified by observing their behavior. The behaviors of these children are often *different* from those of normal children. Children who have problems display responses, or behaviors, which are *inappropriate* in given situations, and they exhibit *inappropriate* behaviors *frequently*. This is important to keep in mind when attempting to identify children with problems by observing their behavior.

It is important to remember that children with problems may appear normal in many areas of behavior. Also, any child with problems defies generalization. No one particular pattern of behavior will describe all children with problems. Different inappropriate behaviors must occur frequently and be observed before the teacher *can identify a child as one who is having problems in the social-emotional area.*

Plate 25.2

	GOAL AND STRATEGY WITH THOUGHT ONLY	GOAL AND STRATEGY WITH THOUGHT AND FEELING
Goal:		
Behavior:	Child will count five blocks	Child will count five blocks and will be asked "How do you feel you did?"
Conditions:	In presence of a group of from four to six children and the teacher	In presence of a group of from four to six children and the teacher
Criteria:	Child must count five blocks in order	Child must count five blocks in order and respond to the question with one of these feelings: good, O.K., bad, etc.
Strategy:	Child will be given one more block to count each week.	Child will be given one more block each week. Teacher will ask child question about his feelings regarding his work, and child will give a verbal response.

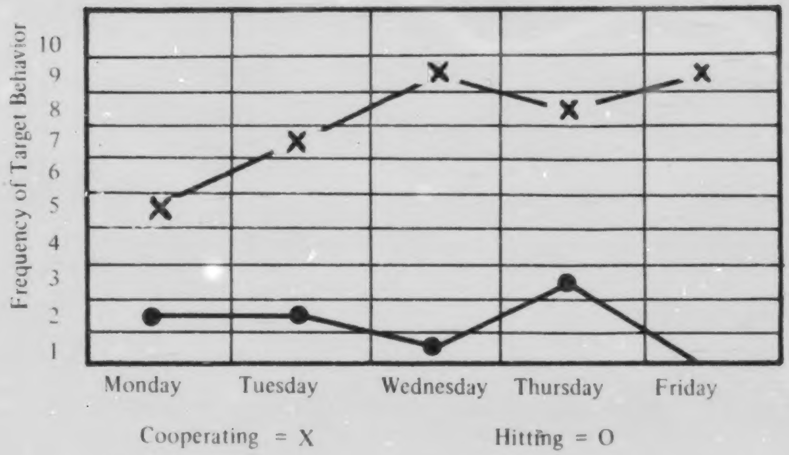
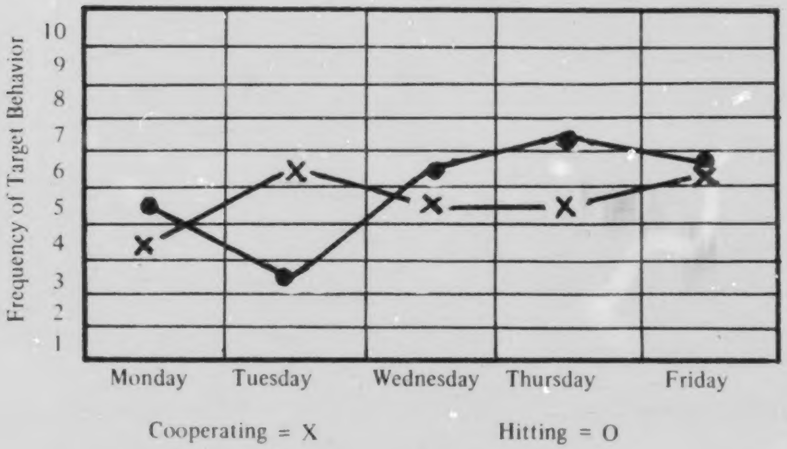


Chart of Target Behaviors (3rd week)



Baseline Data (1st week)

Plate 25.3. BASELINE DATA (1st Week)

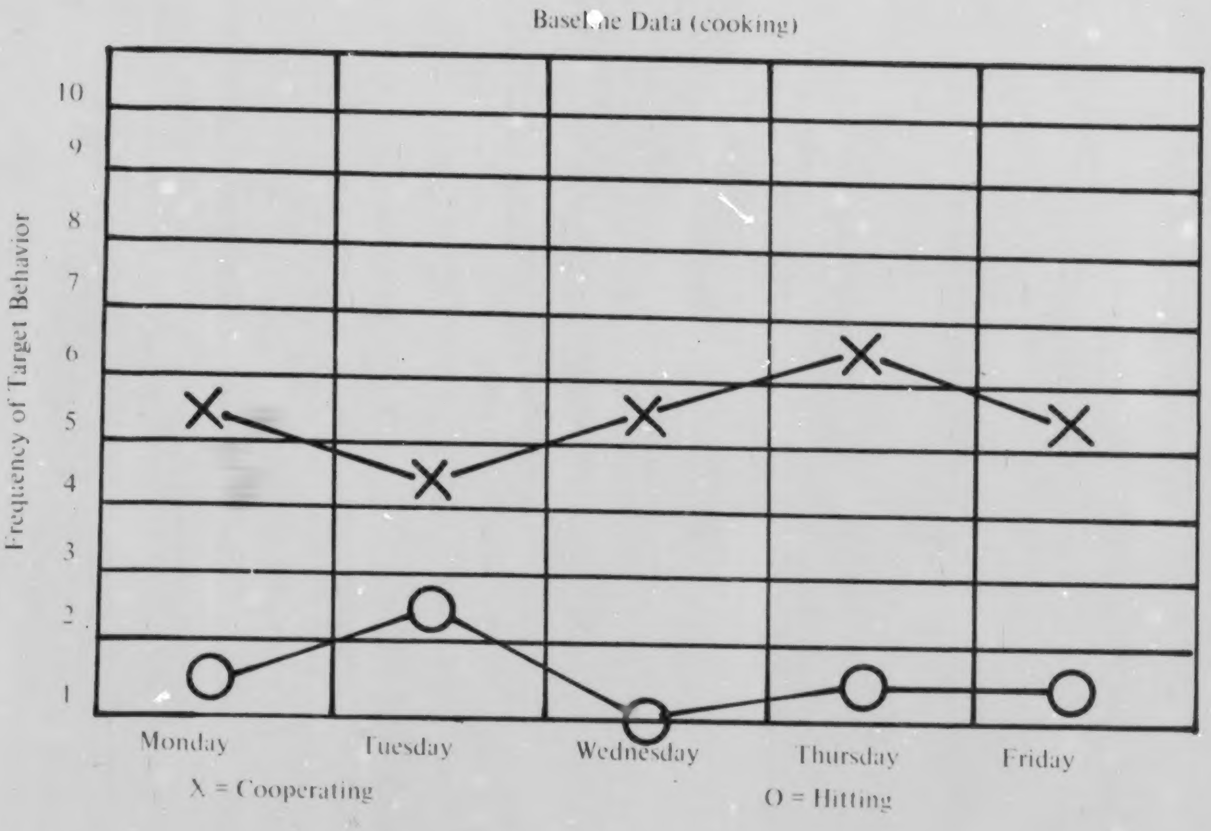
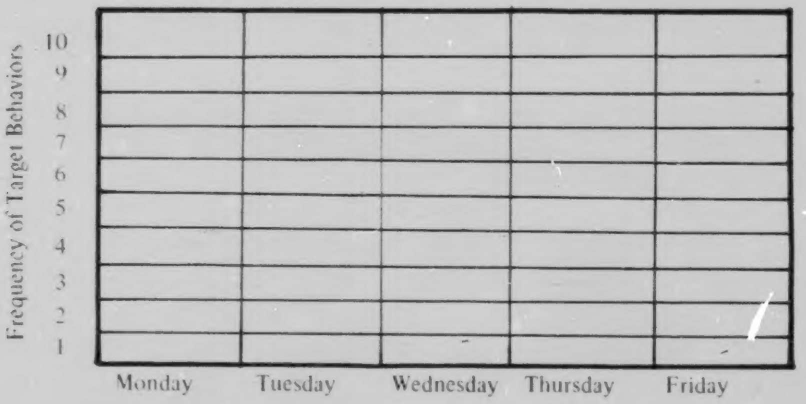


Plate 25.4. BASELINE DATA (cooking)

Plate 25.5 CHART OF TARGET BEHAVIORS

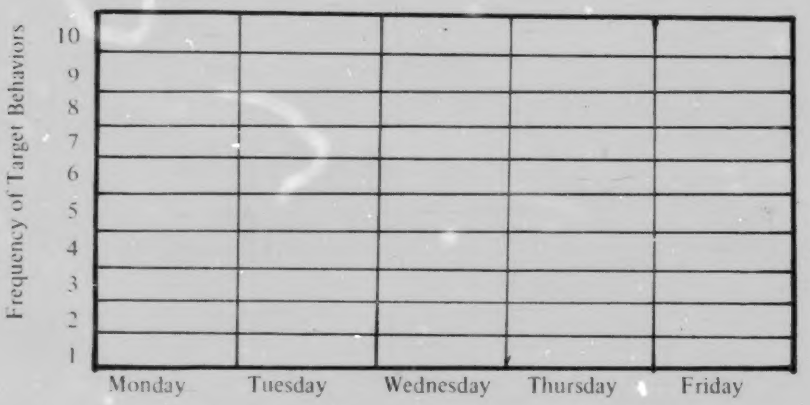
Week ______________



X =

O =

Week ______________



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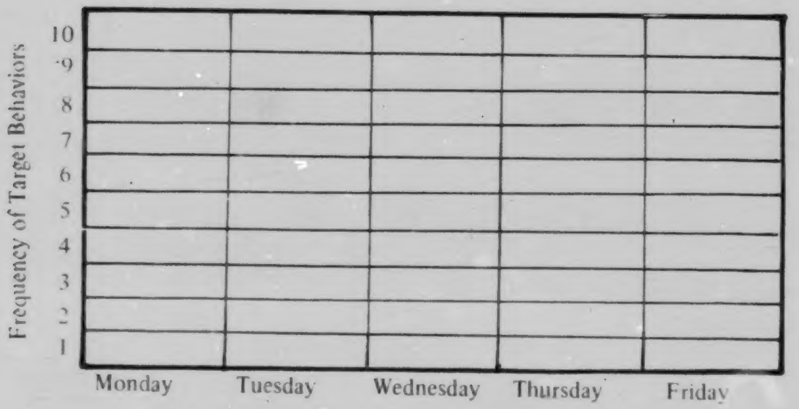
Week ______________



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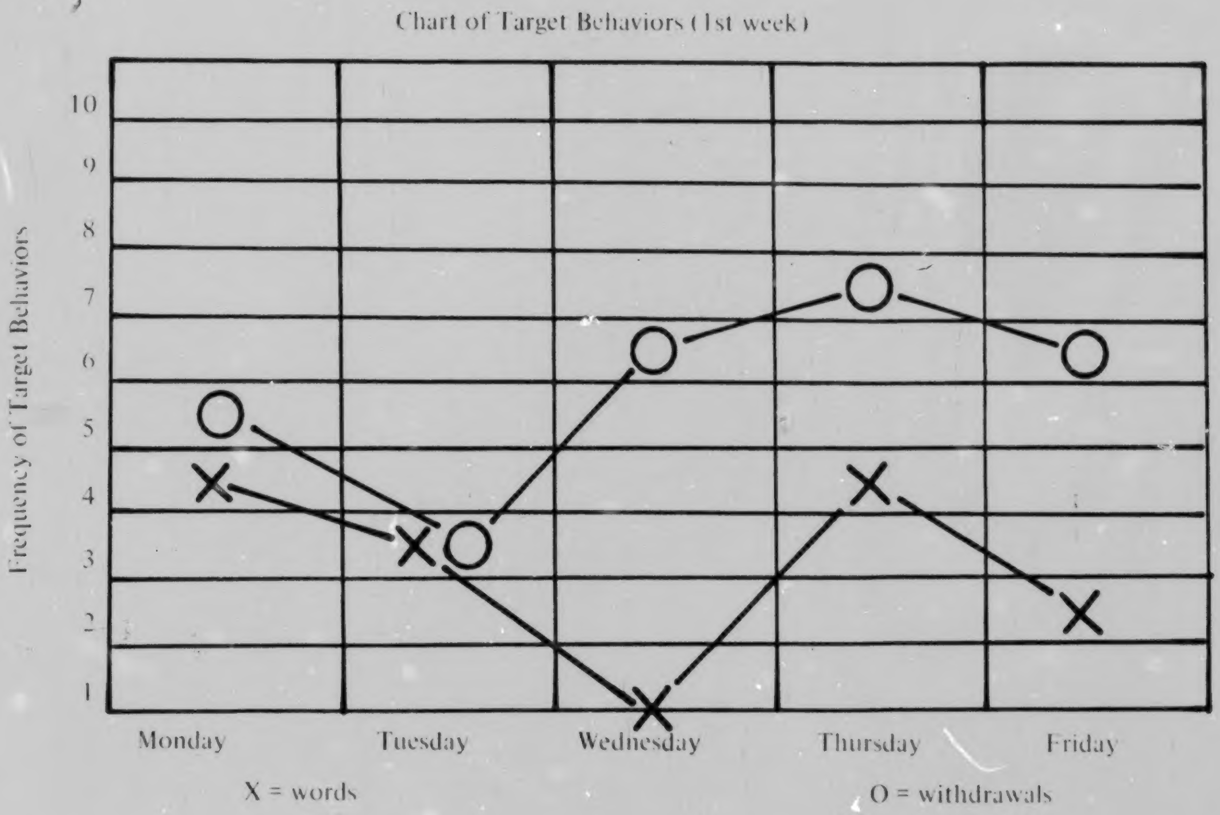


Plate 25.6. CHART OF TARGET BEHAVIORS (1st Week)

Plate 25.7

COMPONENTS OF A BEHAVIORAL OBJECTIVE

1. Behavior: Ben will say some words with other children.
2. Conditions: During social-emotional discussion groups
3. Criteria: 5 words

Summary

1. The classroom is a laboratory for social emotional development.
2. How a child feels is more important than what he knows.
3. The characteristics of the learner, the teacher, and the environment are all related to each other, and they all interact with each other in the teaching-learning process.
4. A variety of procedures and activities can be used to specifically encourage and facilitate the teaching-learning process.
5. Different inappropriate behaviors must occur frequently and be observed before the teacher can identify a child as one who is having problems in the social-emotional area.

REFERENCES

Chapter 25

Social and Emotional Development

AVILA, D. L., COOMBS, A. W. and PURKEY, W. W. (Eds.). *The helping relationship sourcebook*. Boston: Allyn and Bacon, 1971.

BENNIS, W. G., et. al. (Eds.). *Interpersonal dynamics*. Homewood, Illinois: The Dorsey Press, 1968.

BERGER, S. Conditioning through vicarious instigation. *Psychological Review*, 1962, 69, 450-466.

BORKE, Helene. Interpersonal perception of young children. *Developmental Psychology*, 1971, 5, 263-269.

BORTON, T. *Reach, touch, teach*. New York: McGraw-Hill, 1970.

BOY, A. V. and PINE, G. J. *Expanding the self: Personal growth for teachers*. Dubuque, Iowa: William C. Brown, 1971.

BRYAN, J. H. and LONDON, P. Altruistic behavior by children. *Psychological Bulletin*, 1970, 73, 200-211.

BUBER, M. *I and thou*. New York: Charles Scribner's Sons, 1968.

COOMBS, A. W., AVILA, D. L., and PURKEY, W. W. *Helping relationships*. Boston: Allyn and Bacon, 1971.

COOMBS, A. W. *The professional education of teachers*. Boston: Allyn and Bacon, 1965.

FAIRFIELD, R. P. (Ed.). *Humanistic frontiers in American education*. Englewood Cliffs, New Jersey: Prentice-Hall, 1971.

FESHBACK, Norma, D. and ROE, Kiki. Empathy in six- and seven-year-olds. *Child Development*, 1968, 39, 133-145.

GERGEN, K. J. and MARLOWE, D. *Personality and social behavior*. Reading, Massachusetts: Addison-Wesley, 1970.

GLASSER, W. *Schools without failure*. New York: Harper and Row, 1969.

GORMAN, A. H. *Teachers and learners: The interactive process of education*. Boston: Allyn and Bacon, 1969.

GREER, Mary and RUBINSTEIN, Bonnie. *Will the real teacher please stand up?* Pacific Palisades, California: Goodyear, 1972.

GROSS, R. and GROSS, Beatrice (Eds.). *Radical school reform*. New York: Simon and Schuster, 1969.

HAMACHEK, D. *The self in growth, teaching, and learning*. Englewood Cliffs, New Jersey: Prentice-Hall, 1965.

HARTSHORN, Edwina and BRANTLEY, J. C. Effects of dramatic play on classroom problem-solving ability. *The Journal of Educational Research*, 66, 1973, 243-246.

JAHODA, Marie. *Current concepts of positive mental health*. New York: Basic Books, 1958.

JERSILD, A. T. *When teachers face themselves*. New York: Teachers College, 1955.

JONES, R. M. *Fantasy and feeling in education*. New York: New York University Press, 1968.

KREBS, D. L. Altruism – an examination of the concept and a review of the literature. *Psychological Bulletin*, 1970, 73, 258-302.

KOHN, M. and ROSMAN, Bernice, L. Relationship of preschool social-emotional functioning to later intellectual achievement. *Developmental Psychology*, 1972, 6, 445-452.

LEUBA, C. *Personality: Interpersonal relations and self-understanding*. Columbus, Ohio: Charles E. Merrill, 1962.

LIGON, Mary, G. and McDANIEL, Sarah, W. *The teacher's role in counseling*. Englewood Cliffs, New Jersey: Prentice-Hall, 1970.

LONG, N. J., MORSE, W. C. and NEWMAN, R. G. (Eds.). *Conflict in the classroom*. Belmont, California: Wadsworth, 1971.

LYON, H. C. *Learning to feel – feeling to learn*. Columbus, Ohio: Charles E. Merrill, 1971.

MANNING, D. *Toward a humanistic curriculum*. New York: Harper and Row, 1971.

MASLOW, A. H. *Toward a psychology of being*. Princeton, New Jersey: Van Nostrand, 1968.

MAY, R. *Existence: A new dimension in psychiatry and psychology*. New York: Basic Books, 1962.

McCASLIN, Nellie. *Creative dramatics in the classroom*. New York: David McKay, 1968.

MORRIS, V. C. *Existentialism in education*. New York: Harper and Row, 1966.

NATALICIO, L. F. S. and HEREFORD, C. F. *The teacher as a person*. Dubuque, Iowa: William C. Brown, 1971.

PURKEY, W. W. *Self concept and school achievement*. Englewood Cliffs, New Jersey: Prentice-Hall, 1970.

ROGERS, C. R. *On becoming a person*. Boston: Houghton Mifflin, 1961.

SCHMUCK, R. A. and SCHMUCK, P. A. *Group processes in the classroom*. Dubuque, Iowa: William C. Brown, 1971.

SCHOOL DISTRICT OF PHILADELPHIA. *The living classroom: Affective education program*, 1972.

SELMAN, R. L. Taking another's perspective: Role-taking development in early childhood *Child Development*, 1971, 42, 1721-1734.

SILBERMAN, C. E. *Crisis in the classroom*. New York: Random House, 1970.

STEIN, J. *Effective personality: A humanistic approach*. Belmont, California: Brooks/Cole, 1972.

STROM, R. D. and TORRANCE, E. P. *Education for affective achievement*. Chicago: Rand McNally, 1973.

THOMPSON, G. G. (Ed.). *Social development and personality*. New York: John Wiley and Sons, 1971.

WEINBERG, C. (Ed.). *Humanistic foundations of education*. Englewood Cliffs, New Jersey: Prentice-Hall, 1972.

WEINSTEIN, G. and FANTINI, M. D. (Eds.). *Toward humanistic education*. New York: Praeger Publishers, 1970.

I II III IV V VI

Application of the Diagnostic Teaching Model VII

VIII IX X

CHAPTER 22. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO LANGUAGE DEVELOPMENT

CHAPTER 23. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO READING

CHAPTER 24. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MATHEMATICS

CHAPTER 25. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO SOCIAL-EMOTIONAL DEVELOPMENT

CHAPTER 26. APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MOTOR DEVELOPMENT presents a program to help teachers aid children having difficulties with the gross motor movements of the body.

- A child's age is the best reference point for deciding if his lack of motor skill is actually a problem.
- A teacher must observe for two types of motor behaviors: mastery of the fundamental skills and development of strength and speed.
- The use of the Movement Patterns Checklist allows the teacher to collect specific information on the child's movements to determine the proper diagnostic plan.

CHAPTER TWENTY-SIX

APPLICATION OF THE DIAGNOSTIC TEACHING MODEL TO MOTOR DEVELOPMENT

Chapter Five defines Motor Development as learning to control muscle movements so that the body does what its owner wants it to do. This chapter focuses on gross motor problems: that is, children having difficulties with the large movements of the body during running, throwing, jumping, skipping, and so forth

Ideally, children with gross motor problems are the responsibility of the physical education teacher. However, it is often the case that school districts cannot afford to hire enough of these specialists to work individually with children experiencing gross motor difficulties. Because of the under staffing the responsibility for dealing with these children often falls on the classroom teacher and his aides (if he's lucky enough to have any).

Mini-Decision Model

The first step in dealing with a child with gross motor problems is "identifying relevant characteristics;" that is, *diagnosis* of the problem. For this chapter a mini-decision model has been drawn to illustrate the specific diagnostic steps to follow for gross motor problems (Plate 26.1).

The first box in the mini-model is labelled "Some difficulty is spotted." In other words, the teacher notices, as he watches the children during play, that a child does not seem to perform certain activities with ease. However, the teacher cannot always trust his own observations. Sometimes, a child's difficulty in performing some skill is really quite normal for children his age. So, to check himself, the teacher refers to the tables of average development for gross motor skills.

Tables of Average Development

Later in this chapter, Plate 26.7 and 26.9, two separate tables of average development are provided. The first covers basic skills, the skills whose fundamentals are usually mastered during the preschool years.

The second table focuses directly on the major motor achievement of the primary years: strength and speed. The four activities listed are ones that are relatively easy for a teacher to take records on and which cover the major muscle groups (in the *arms* and the *legs)* that are responsible for increases in strength and speed.

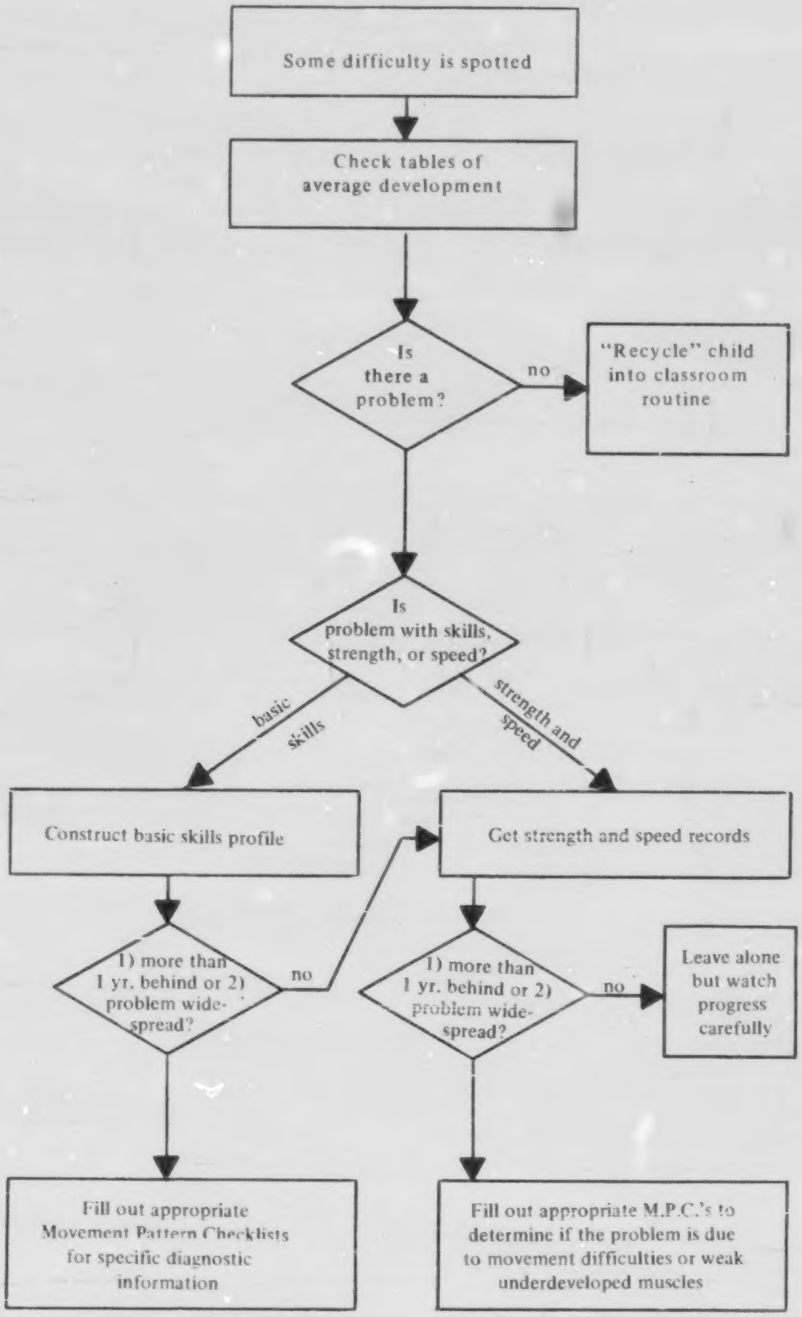

Some difficulty is spotted
Check tables of average development
Is there a problem?
no
"Recycle" child into classroom routine
Is problem with skills, strength, or speed?
basic skills
strength and speed
Construct basic skills profile
Get strength and speed records
1) more than 1 yr. behind or 2) problem wide-spread?
no
1) more than 1 yr. behind or 2) problem wide-spread?
no
Leave alone but watch progress carefully
Fill out appropriate Movement Pattern Checklists for specific diagnostic information
Fill out appropriate M.P.C.'s to determine if the problem is due to movement difficulties or weak underdeveloped muscles

Plate 26.1. DIAGNOSIS: A MINI-DECISION MODEL

Which of the two tables to use will depend on the kind of difficulty spotted. If the child seems to be running slower or throwing less far than the other children, the strength and speed table is used. If there seems to be something wrong with the *way* he performs the skill (i.e., if he seems clumsy, trips over his own feet, uses a lot of unnecessary movements of the arms and legs, and so forth), the basic skills table is used.

These tables should enable the teacher to decide if the child really has a problem. (The first diamond on the model.) This is really a very simple question. If the observation was a "mistake" (that is, the child is doing above average for his age) the teacher drops the matter. If it looks like the child might have a problem of some sort, the teacher moves down to the next decision point on the model.

The diamond that reads "Does the problem seem to be with basic skills or with strength and speed" also invovles a relatively simple decision. As a matter of fact, the teacher will often have made that decision already at the second box ("Check the tables of average development").

If the child's problem looks like a basic skills difficulty, the teacher follows the arrow going to the left side of the model to the box that reads: "Construct basic skills profile". An example of a completed profile is shown in Plate 26.2. Using the basic skills table as a guide, the teacher watches the child performing the skills listed under each of the four categories. Then he "places" the child in the age-box that most closely corresponds to what the child can do. For primary children, there will often be one or two categories where there are "No Problems". That is, the child has mastered the basic skills in that category and so doesn't fit into any of the age-boxes provided.

After the teacher has filled out a basic skill profile, he moves down to the next decision diamond. Here he uses a rule-of-thumb: He will continue with further diagnosis of specific problems if the child is *more than one year behind* the average for his age. People working with 7 and 8 year olds won't have to worry about this decision. For children that old, the very fact that the teacher suspects they have a basic skills problem at all makes them automatically more than one year behind.

A Rule-of-Thumb

However, people working with 5 or 6 year olds may sometimes find out from the basic skills profile that the child is *only one year behind* on any of the categories. Since the teacher should leave some room for individual differences, he will not continue diagnosing the child's problem but will move to the right hand side of the model.

	balance	walking-running	throwing-catching	kicking hopping
Age 2	NO PROBLEM	NO PROBLEM		
Age 3				
Age 4			○	
Age 5				○

Collin – Age 6

Plate 26.2 COMPLETED PROFILE

There is one exception to this rule of thumb. It sometimes happens that while a child may not be more than one year behind in any of the categories, he's a little behind on many or all of the skills. In other words, his problems, although not severe, are widespread. In that case, the teacher *would* go on to further diagnosis.

The last diagnostic step to take, is to fill out the Movement Pattern Checklists on the 1) skills with which the child is having the most difficulty and/or 2) skills that are very fundamental (i.e. walking, running, balance, and standing posture are all extremely important skills).

The checklists allow the teacher to collect specific information on exactly what it is the child is doing wrong and on what correct movements he isn't using.

Speed and Strength Record

Now, if the teacher originally decided that the problem was a strength and speed difficulty *or* if he constructed a basic skills profile and found that the child did not need further diagnosis on basic skills, he would move to the right hand side of the model starting with the box "Construct strength and speed record". Plate 26.3 shows an example of how such a record could be set up. The child's performance is compared with the average performance of 5 year olds and 8 year olds from the strength and speed table.

Once this information is collected, the teacher uses the rule-of-thumb (remembering the one important exception) to decide if he should go on to more detailed diagnosis. If the child is *not* more than a year behind on any activity and his problems are *not* widespread, the teacher should not consider the difficulty serious at this time. But he should keep a close watch on the child's progress in case the difficulty should become more serious later on.

If the child is more than a year behind or his problems *are* widespread, the teacher moves down to the box concerning the Movement Pattern Checklists. This time, however, the teacher has some other factors to consider. A basic skill problem almost always involves something wrong with the movements a child is using, the teacher fills out the Movement Pattern Checklists just to get specific information on those movements. A strength and speech problem, on the other hand, could involve something wrong with movements or the problem could be due to weak, underdeveloped muscles. Now when the teacher fills out the Checklists, he is trying to decide if the problem is a movement problem or a weakness problem.

Plate 26.3

EXAMPLE OF STRENGTH AND SPEED RECORD

Ronny – Age 7

	Running	Vertical Jump	Broad Jump	Throwing (Boys)
Age 5	3½ yards per sec.	2½ in.	30-35 in.	25 ft
Age 8	5 yards	8 in.	45 in.*	55-60 ft.
Ronny's Performance	4½ yards	7 in.	35 in.*	49 ft.

*More than a year behind for his age.

If the completed Movement Pattern Checklist indicates that many improper movements are being used, then the teacher can conclude that the child has a movement problem. If the completed Movement Pattern Checklist is pretty clean (that is, if the child is using most of the correct movements and has few incorrect movements), then the child probably has a weak, underdeveloped muscle problem. The decision the teacher makes now will affect the objectives he writes and the remediation strategies he uses.

Writing Behavioral Objectives

With the Movement Pattern Checklist information gathered, the teacher can begin to work on objectives. In the case where the problems involve specific movements, (i.e., almost all basic skill difficulties and the strength and speed problems due to movement difficulties), the first step is to develop proper teacher goals. This is simple. For each skill in which there is a problem, the overall teaching goal is to teach the child sufficient mastery of the skill so that he can perform it with the proficiency of other children his age. In other words, the teacher is not out to turn the child into an athlete, but to teach him to perform the skills as well as his peers. The tables of average development represent what is meant by "as well as his peers."

The rules to follow for writing specific behavioral objectives are the same as those shown in Chapter 12 on Instructional Objectives. The information the teacher uses as the content of his objectives are the items from the Movement Pattern Checklists just filled out. To begin with, the teacher can arrange the items into categories as shown in Plate 26.4. Then he looks for items that are part of the same problem which can be combined into one single objective. For example, the "bending too far forward" item and the "lack of an unsupported phase" item (Plate 26.4) are really both part of the same problem which can be remedied through the objective: "will leap, completely off the ground, with each new running step for a distance of 2 - 3 feet." Once the teacher has covered all the items with objectives, we are through with that step in the overall Diagnostic Teaching Model.

With children who have strength and speed problems due to weak muscles, the objective writing task is much easier. All the teacher needs to do is find an approximate distance or rate from the strength and speed table to use as an objective. For example, using the information from Plate 26.3 he could write this simple objective: "Ronny will do a broad jump of 40 inches." And that's all there is to it, since there are no specific movements to work on.

Plate 26 4

ITEMS FROM MOVEMENT PATTERN CHECKLIST

CORRECT MOVEMENTS USED
- Uses both legs equally

DEVIATIONS/PROBLEMS
- Heavy landing
- Flatfooted
- Body (trunk in particular) carried too far forward
- Arms up and forward, but clenched and held rigid to sides

CORRECT MOVEMENTS NOT USED
- Unsupported phase
- Ball of foot touches first
- Even flow and rhythm

Selecting Strategies

With the objectives completed, the teacher moves on to selecting teaching strategies for remediation. Here, too, what to do for children with movement difficulties is different from what to do with children who have underdeveloped muscles. For movement problems, the teacher begins by deciding which major way of learning he will base his strategies on. The three ways of learning are:

1. by being told, verbal instruction;
2. by watching others and copying them; and
3. through direct experience.

On gross motor skills, the teacher usually chooses strategies based on No. 2 to start out with. That is, the teacher demonstrates the proper movements for the child so that he can copy them. Sometimes, however, demonstration isn't enough by itself. The child may know in his head what to do but be unable to get his muscles to do it, on their own. So the teacher drops down to strategies based on No. 3, direct experience. He sets up a remedial sequence of activities that force the child's muscles to get direct experience with the desired movements. An example of such a sequence is shown in Plate 26.5.

Plate 26.5

ERIC'S REMEDIAL SEQUENCE

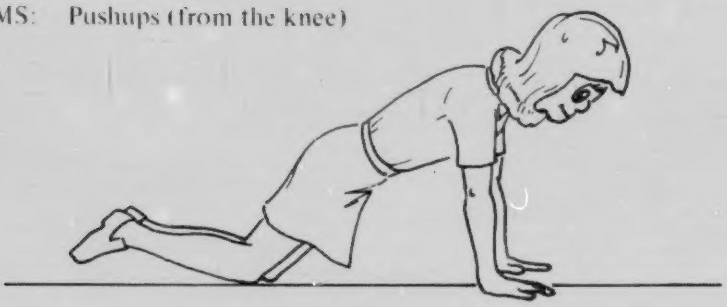
1. Ordinary walking, reminding him that his back is straight
2. Walking fast, reminding him to keep his back straight
3. Walking fast with long strides (and always reminding him to keep his back straight
4. Moving the footprints *just far enough apart* to force Eric to leap for them
5. Leaping as specified in our objective

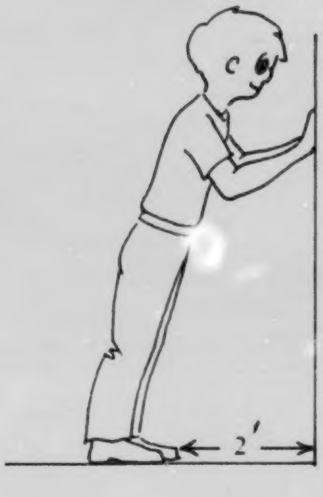
For children with strength and speed problems due to weak muscles (which is not the same thing as muscles which are having trouble learning to do proper movements), once again the job is easier. The best remediation for weak muscles is calisthenic-type exercises. Some examples are shown in Plate 26.6 and many more ideas can be gotten from any good exercise book. Depending on where the weak muscles are (in the arms, in the legs, or whatever), the teacher chooses exercises directed at those muscles and keeps working on them until the child can meet the objective.

Plate 26.6

EXERCISES FOR WEAK MUSCLES
Some Examples

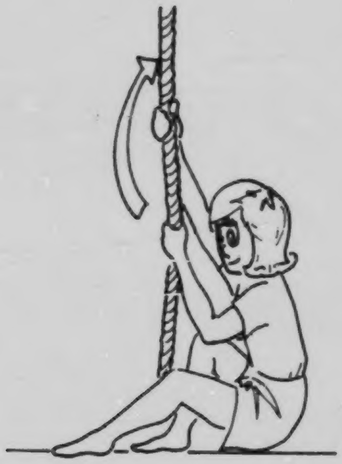
ARMS: Pushups (from the knee)



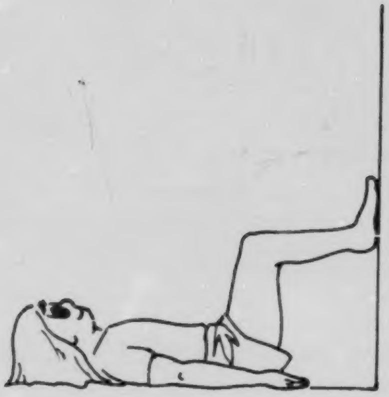


Standing Wall Push

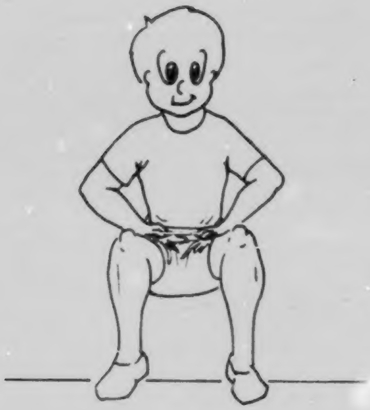
Seated-to-Standing Rope Climb



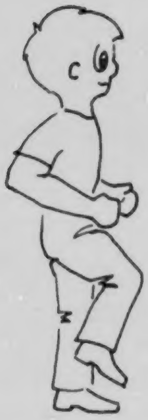
LEGS: Isometric Leg-pushing



Deep Knee Bends



Running in Place



Evaluation

When remediation has been at least attempted for each of the objectives, the teacher should consider evaluation. Three types of evaluation are listed below:

1. Informal evaluation during remediation
2. Testing performance against objectives
3. Comparing performance with peers

The first type, informal evaluation during remediation, is a procedure to use when the child is moving through remedial sequences or the strategies are changing to better fit the child's learning needs.

The second level of evaluation involves re-checking the child's performance against all the objectives. If some objectives are not met, the teacher must return to the remediation step in the model and re-think his teaching strategies. Sometimes all that is necessary is additional practice.

When all the objectives are met, the teacher compares the child's performance with the other children's. At this point the teacher will frequently find strength and speed problems in children who started out with basic skills problems. This is to be expected, and all the teacher needs to do is change the focus to developing the child's strength and speed.

Also at this time, the teacher may discover problems he didn't notice before or find that somehow his efforts have been misdirected. Then he must review the diagnostic procedures he used, the objectives he wrote, and the teaching strategies he developed. If the teacher can find no obvious errors, it is best to refer the child to a specialist or at least seek such a person's advice.

Plate 26.7

TABLES OF AVERAGE DEVELOPMENT: GROSS MOTOR

AGES FIVE TO EIGHT

Strength and Speed

	Running	Vertical Jump	Broad Jump	Throwing
Age 5	At this age both boys and girls can run about 3½ yards per second.	Both boys and girls can do a vertical jump of about 2½ inches. (This is measured as shown in Plage 26.8).	Both boys and girls do a standing broad jump of about 30–35 inches.	Whereas *boys* throw a softball about 25 feet, *girls* throw about 15 feet.
Age 8	By this age, both boys and girls usually run about 5 yards per second.	Their vertical jump has gone up to around 8 inches.	They can do a broad jump of about 45 inches.	*Boys* now throw a ball 55 – 60 feet. *Girls* throw about 35 feet.

Plate 26.8

VERTICAL JUMP

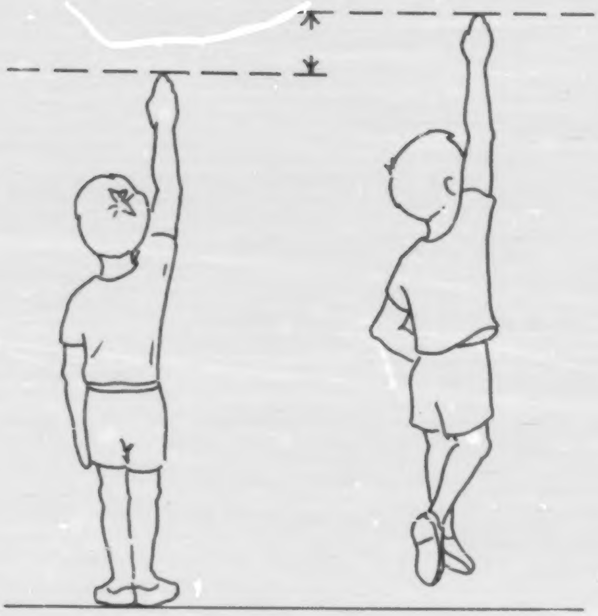


Plate 26.9

TABLES OF AVERAGE DEVELOPMENT: BASIC GROSS MOTOR SKILLS

Balance

2 years – With regard to his major motor activity (walking), the two year old's sense of balance is relatively mature. He rarely falls, although there may still be a stagger to his steps, his feet may still be spread apart, and he may lean forward somewhat.

3 years – The three year old's balance is such that he can walk a balance beam for short distances and can stand on one foot for a few moments with his eyes open.

4 years – The four year old can balance on one foot for five seconds with eyes open.

5 years – The five year old can balance on one foot for ten seconds with his eyes open.

Walking and Running

2 years – The two year old's walking rhythm becomes even. He walks up and down stairs, although he cannot alternate his feet. He can walk backwards and sidewards. He can walk on his tiptoes. Running first appears.

3 years – The three year old can walk heel-to-toe (Indian style) alone a line ten feet long. He will walk a balance beam for a few steps. He can speed up and slow down his walking and running at will. He can turn sharp corners. He can alternate feet when walking *up* stairs.

4 years – The four year old can walk a circular line without stepping off the line. He can walk *down* stairs alternating feet if there is a railing to hold on to. He can walk a ten-foot balance beam, only stepping off about three times. He can run smoothly and at different speeds.

5 years – The five year old can walk three yards on tip toes. He can walk down stairs, alternating feet without any support. He can run a thirty-five yard dash in about ten seconds. He can walk a ten-foot balance beam without stepping off, or only stepping off once.

Kicking, Hopping, Skipping, and Jumping

2 years – The two year old can kick a small ball forward. He can jump off the floor with both feet.

3 years – The three year old can hop two or three steps on his preferred foot. He can do a *standing* broad jump of about eight to ten inches.

4 years – The four year old can make a *running* broad jump of two to three feet. He can skip with one foot, but the regular skipping pattern of alternating feet is still absent.

5 years – The five year old can hop fifty feet in eleven seconds. He skips with both feet in the correct pattern. He can kick a soccer ball through the air around ten feet.

Throwing and Catching

2 years – A two year old can throw a small ball four to five feet but with erratic and clumsy movements. He will use either hand as he has no preference yet.

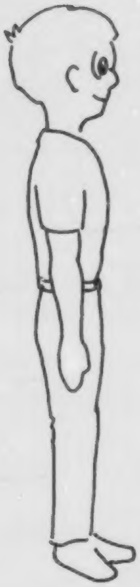
3 years – A three year old can throw a small ball about ten feet, throwing mostly with the shoulder and elbow.

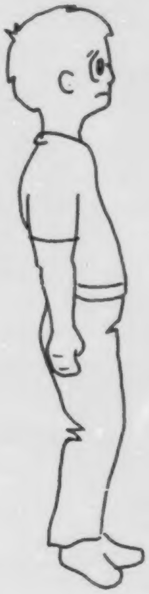
4 years – A four year old can aim a ball straight ahead of him and has a definitely preferred hand.

5 years – Sex differences are easy to see by this age. Boys have relatively coordinated movements and throw about twenty-four feet. Girls are still a little clumsy in their throwing and throw about fifteen feet. Both boys and girls can catch a playground ball that is bounced to them.

Plate 26.10

ATTRIBUTES OF GOOD POSTURE USUALLY ATTAINED BY AGE 3





Good Posture	Poor Posture
The child stands at his full height, with his weight on the balls of his feet.	The child stands in a slumped position, with his weight on his ankles and heels.
He holds his head high, with his chin in.	He holds his head forward with his chin out.
His chest is high and his shoulder blades do not stick out in the back.	His chest is flattened and sunken and his shoulder blades stick out in the back.
His abdomen is drawn in.	His abdomen is relaxed and sags.
The curves of his back are slight.	The curves of his back are too great.
His knees are straight.	His knees are slightly bent.

Plate 26.11

MOVEMENT PATTERN CHECKLIST – STANDING

Observe the child in his normal standing position when he is unaware he is being checked and has not been told to take a "good position". Also observe him in a "good" standing position assumed upon request. If there are any differences in the normal and the attempted "good" positions, these can be noted on the checklist. Otherwise a comment to the effect that there is no difference in the two should be made under "Remarks". Observe the child from all sides: back view, front view and both sides. Note differences or imbalances if they exist. Be sure the child is dressed so the position of various body parts, as well as the total body position, can be easily seen. Have child stand a long enough time to note shifts in body position during prolonged standing (at least one full minute) and whether he can remain standing that long. Some slight sway or movement in various direction while trying to stand still is normal. However, note whether the child moves excessively in any one or more directions or is excessively stiff and rigid. Watch for a single body part that keeps moving, such as a hand. Watch for sudden jerks back to an erect standing position. Can the child stand with his feet together or must he spread them apart? If so, note in which direction and approximately how far in relation to his size. Note whether he must be told to put his feet together and how he stands before being told.

Date ____________ Age ______ Sex ______ Name ____________________

Pattern Elements Present

______ Erect posture
______ Body parts aligned with each other
______ Feet parallel
______ Head centered, balanced
______ Weight evenly distributed on feet
______ Shifts weight evenly, equally
______ Knees "easy" relaxed
______ Chest "up"; ___ Seat "in"

Deviations Noted

______ Slumped posture
______ Body part out of line:
____ pelvis, ___ shoulder
______ Feet toed out:
____left ___ right
______ Feet toed in:
____ left, ____right
______ Head forward; ___ to the side:
____ left ___ right ___ turned
____ left ___ right
______ Weight more on one foot:
____ left___ right
______ Rigid, stiff stance
______ Knees hyperextended,
____knees locked: ___ left____right
______ Unable to stay standing in place

Remarks

From
GODFREY, B. and H. C. KEPHART, *Motor patterns and motor educations.* New York: Appleton-Century-Crofts, 1969.

MOVEMENT PATTERN CHECKLIST – WALKING

If possible observe the child in any normal walking situation being sure he walks enough so all necessary points can be noted. Strive for a variety of walking speeds and purposes. Otherwise, simply ask the child to walk somewhere for you, to walk across the room, away from you, towards you, and around or past you as needed. Suggest he walk over to get something and bring it back to you, rather than just walk. Be sure he is walking on a normal walking surface.

Date ____________ Age ______ Sex ____ Name ____________________

Pattern Elements Present

_____ Opposition leg and arm
_____ Fluid transfer of weight
_____ Swing leg through
_____ Straight supporting leg
_____ Heel strikes ground first
_____ Body erect, facing forward
_____ Walks in straight line

Deviations Noted

_____ Shuffle, drag feet:
___ left ___ right
_____ Jerking: ___ on the left side ___ on the right side ___ up-down
_____ Leading with a side:
___ left ___ right
_____ Jarring or heavy step:
___ left ___ right
_____ Marked swaying:
___ left ___ right
_____ Bends forward ___ leans back
_____ Hits one foot with other:
___ left ___ right
_____ Walks on toes:
___ left ___ right

Remarks

ITEM DESCRIPTIONS

Walking Checklist

Below are five items from the walking checklist which the teacher might have found confusing:

Pattern Elements Present

Opposition arm and leg: (See Figure 1)

When a child walks with his arms free to swing, he tends naturally to swing forward the arm on the opposite side of his body from the leg he is putting forward. So, if he is stepping forward with his *right* leg, his *left* arm tends to swing forward. This is what is meant by "opposition leg and arm".

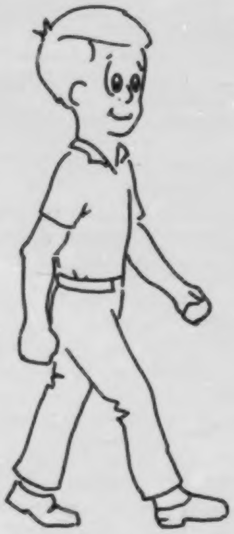


Figure 1

Fluid transfer of weight: (See Figure 2)

One of the most difficult problems some children have is shifting their weight from foot to foot as they walk along. If a person stops to think of where he is putting most of his weight as he walks, he will realize that with each step he takes he is shifting his weight from one foot to the other.

To get an idea of what it is like when he does not shift his weight evenly, a person should remember the last time he hurt one of his feet or legs and could not stand to put his weight on that foot. He limped, didn't he? Instead of shifting evenly from foot to foot, he had to keep his weight mostly on the uninjured foot and his walk lost its relaxed easy stride.

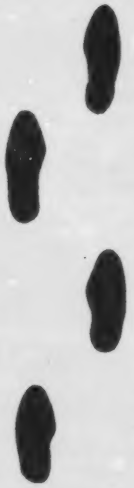


Figure 2

Swings leg through:

A movement that gives walking a relaxed easy stride is the swinging of the legs with every step forward. A person walking gracefully does not pick-up-his-leg-and-put-it-down like a robot. He swings his leg forward smoothly. A child just learning to walk does not have this easy swing yet. Every step takes deliberate effort to pick up and put down the foot.

Straight supporting leg: (See Figure 3)

Each time a person lifts a leg to take a step, the *other* leg has to be straight for him to keep his balance (like on the right side of the figure). If the supporting leg is bent (like on the left side of the figure), the whole body must crouch down, and balance becomes shaky.

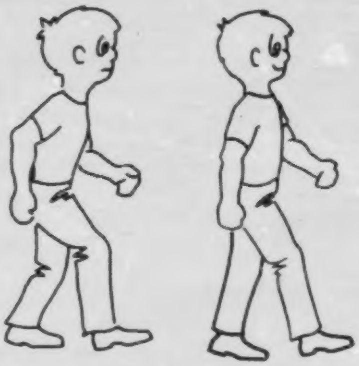


Figure 3

Deviations

Leading with a side: (See Figure 4)

The right side of the figure shows a person walking normally. Notice that he does not twist forward either side of his body from the shoulders or the hips. But the person on the left side of the figure has twisted his body so that one side of his trunk is jutting ahead of the other. This is what we mean by "leading with a side".

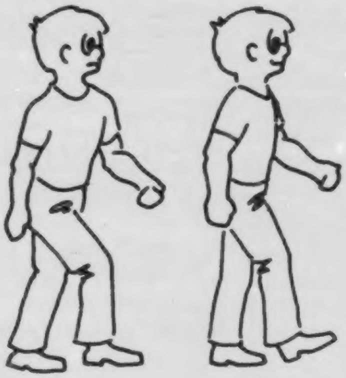


Figure 4

MOVEMENT PATTERN CHECKLIST – RUNNING

Be sure the situation allows a free run and a sufficiently long running distance. Consider space, clothing, footing, and safety. Have the child run to and away from you as well as past you in each direction. Ask him to run slowly and to run very fast. Use a normal game or play situation if possible. Otherwise, simply ask the child to run enough times and in enough different ways to show the information wanted.

Date ____________ Age ________ Sex ______ Name______________________

Pattern Elements Present

______Body inclined forward (from ankles up)
______Unsupported phase (feet off the ground)
______Ball of foot touches first:
  ___ left ___right
______Arms up and forward
______Uses both legs equally
______Uses both arms equally
______Even flow and rhythm

Deviations Noted

______Twists trunk:
  ___ left ___ right
______Flatfooted:
  ___ left ___right
______Jarring or heavy landing
______Body weight, trunk carried backward
______Body weight, trunk carried forward
______Flips leg out:
  ___ left ___ right
______Exaggerated armswing

Remarks

ITEM DESCRIPTIONS

Running Checklist

Here are four items from the running checklist that may be difficult to understand:

Pattern Elements Present –

Unsupported phase: (See Figure 5)

Probably one of the key movements that distinguishes running from walking is that on every step there is a point where both feet are off the ground. This is the "leaping" part of running, and it is how a person gets such good distance out of every step. If he never leaps off the ground, he will discover that he is not running at all. Instead, he is walking very fast.

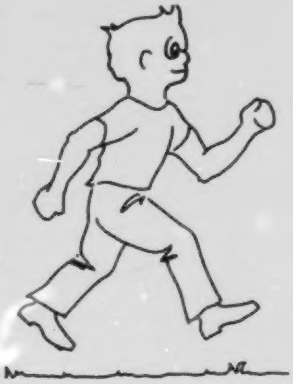


Figure 5

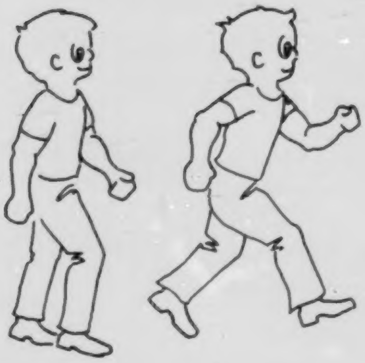


Figure 6

Arms up and forward: (See Figure 6)

When a person walks his arms tend to hang loosely at his sides swinging slightly as he goes along. But when he runs, he bends his arms up at the elbows and holds them slightly out from his sides. If he lets his arms hang loosely when he runs, as he does in walking, they would be flying and flailing all over the place.

Deviations

Body weight, trunk
carried forward: (See Figure 7)

A good runner always leans his body forward somewhat, like the diagram on the right side of the figure. But sometimes a person will bend over at the waist and hunch forward and down as he runs, like the diagram on the left. This throws his body weight too far forward and threatens his balance.

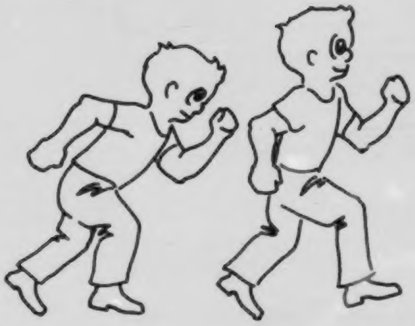


Figure 7

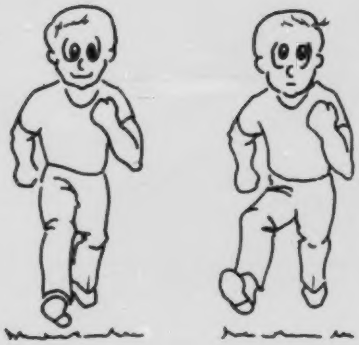


Figure 8

Flips leg out: (See Figure 8)

The figure shows both a normal running position and one where the leg is swinging way out to the side. A good runner's legs move from front to back so that if he drew two lines down from his shoulders, his legs would never pass outside those lines. But the person who "flips his leg out" leaps forward on each new step by swinging his leg out to the side instead of bringing it straight forward.

Some children have this difficulty with only the right or left leg; so it happens only on every other step. Some children do it with both legs, so that "swinging action" interferes with every running step.

MOVEMENT PATTERN CHECKLIST – KICKING

Use a playground or soccer ball as well as some other size ball such as a tennis ball. Have the child perform kicks with either foot and with the ball on different sides of the body, both with a stationary ball and a moving ball. Give the child a ball to kick, then roll one to him to kick, then send one in the air for him to try to kick. Ask him to kick it a short distance, a specified distance, and as far as he can. Check whether the child can kick not only forward but to either side with either foot, and to the back as well.

Date______________ Age______ Sex_____ Name__________________

Pattern Elements Present

______Swings legs from hip
______Opposition arm and leg
______Can kick in any direction
______Can kick with either leg
______Ease and flow of movement
______Both stationary and moving objects
______Preparatory backswing
______Moves in direction of kick

Deviations Noted

______Kicks to one side of body or in one direction
______Loses balance ______almost
______Jerky ____stiff
______No "follow through"
______No control over object,
______ misses object altogether
______Alot of extra, irregular body and arm movements
______Moves backward from kick

Remarks

ITEM DESCRIPTIONS

Kicking Checklist

Here are five items from the kicking checklist that might be difficult to understand.

Pattern Elements Present –

Opposition arm and leg: (See Figure 9)

This is the same kind of "opposition" described for walking. The figure shows a person kicking a ball with his right leg. When he swings his right leg back, he also swings his arms so that the left arm swings back (along with his right leg) and his right arm swings forward. Similarly, when the right leg swings forward, the left arm swings forward and the right arm swings back.

Preparatory backswing: (See Figure 9)

The figure shows kicking in two steps: the swing of the leg back and the swing of the leg forward. A person has to swing his leg back first to get force behind the kick.

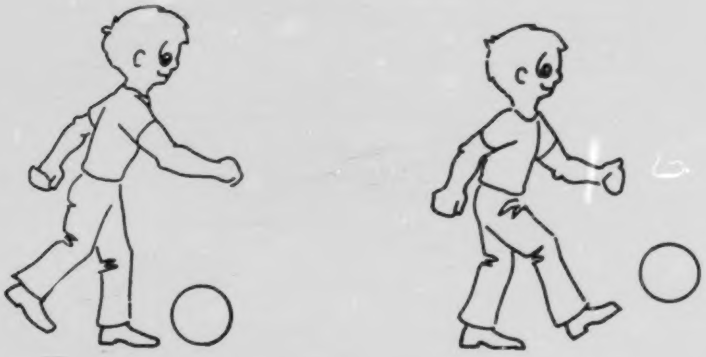


Figure 9

Moves in direction
of kick: (See Figure 10)

A person does not begin a kick from a standing still position. He takes a few steps to approach the ball and a step or two after he has kicked the ball. And, of course, he takes all these steps going forward in the direction the ball is going to go. He does not step backward or off to the side.

Stepping back after he has hit the ball is an incorrect movement. If a child is seen doing this, the teacher should check off MOVES BACKWARD FROM KICK (one of the items listed under "Deviations").

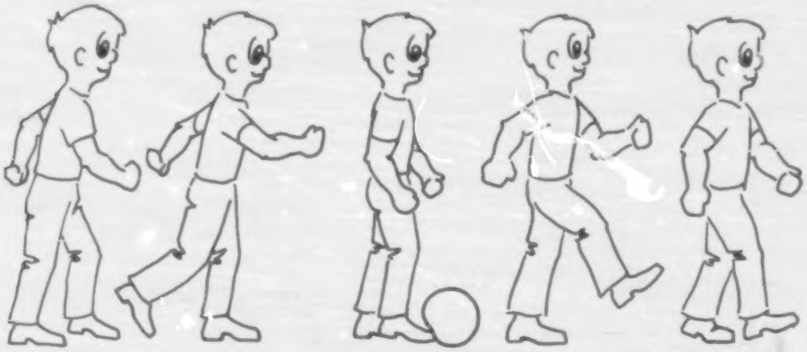


Figure 10

Deviations –

Kicks one side,
one direction only: (See Figure 11)

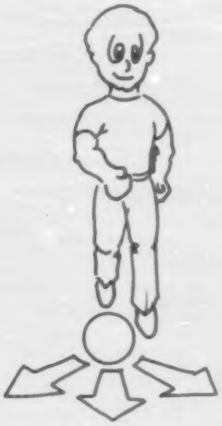


Figure 11

The first part of this item, "kicks one side", refers to the child who can only kick with his right or left foot, but not both.

The second part, "direction", is illustrated in Figure 11. Normally, when a child kicks a ball, he can aim his kick so that the ball goes in one of many different directions. But some children are not so flexible. They may be able to aim straight ahead but not off to the sides. Or they may kick the ball to the left all the time and be unable to kick straight ahead or to the right.

MOVEMENT PATTERN CHECKLIST – JUMPING

Ask the child to do each of the three regular jumps, and to do them several times: the two-foot take-off or basic jump, the one-foot take-off from the left foot and the one-foot take-off from the right foot. Check results in a play or game situation when possible. Have him do big jumps, little jumps, high jumps, jump turns and jumps to each side. Have the child jump over an obstacle. Note similarity and difference among jumps. Have him jump in place particularly to note his ability to remain in place. See if he can jump as well with one foot as the other and evenly with both.

Date __________ Age _______ Sex _______ Name ______________________

Pattern Elements Present

______Arms swing back as legs bend
______Arms swing up as legs extend
______Brings arms down on landing
______Uses two-foot take-Off:
___ left ___right
______Straight direction
______Jumps in place, same spot
______Opposition arm-leg on one foot jump

Deviations Noted

______Normal arm swing or
___ back only, ___ up only
______Jumps to the side: ___left,
___ right
______Stumbles or falls on landing
______Can land on two feet with ONE FOOT take-off
______Doesn't use arms to help
______Uses one arm only:
___ left, ___ right
______Twists or bends to the side:
___ left ___right

Remarks

ITEM DESCRIPTIONS

Jumping Checklist

Three kinds of jumps are considered here. The first one is an ordinary Standing Broad Jump (what is listed as the two-foot take-off or basic jump). There is no running start in this kind of jump. The child stands naturally with his toes touching a starting line drawn on the floor. He jumps as far as he can, landing on both feet. (See Figure 12).

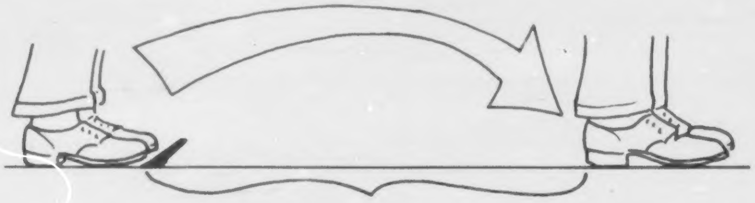


Figure 12

Jumping in place (Figure 13) is the same as the broad jump except, of course, that the child just jumps straight up in the air instead of jumping over a distance.

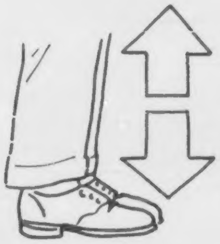


Figure 13

The one-foot jumps are also like the broad jump except that instead of starting out with both feet on the ground, the child balances on either the right or left foot and jumps from that position (See Figure 14). He lands on both feet, however.

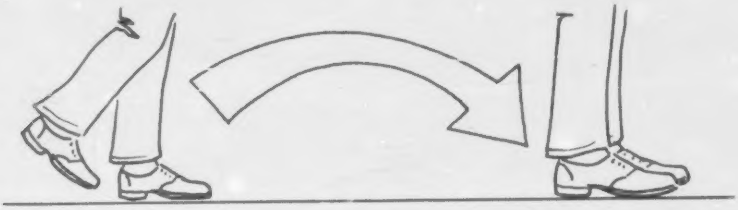


Figure 14

Below are six items from the Jumping Checklist that may be confusing:

Pattern Elements Present

Arms swing back as
legs bend: (See Figure 15)

When a person jumps he uses his arms to gain momentum and help him jump further. So the way he swings his arms is very important. The figure shows three phases of a broad jump. As he bends his knees, getting ready to spring forward, he swings his arms back (swing diagram on far left of the figure).

Arms swing up as
upper legs extend: (See Figure 15)

And just as he springs, bringing his legs up and forward, he also swings his arms forward and up (see diagram in the middle of the figure). It is the forceful swinging action of the arms that gives his jump distance.

Bring arms down on
landing: (See Figure 15)

When he lands, the arms fall back down to his sides (see far right of figure).

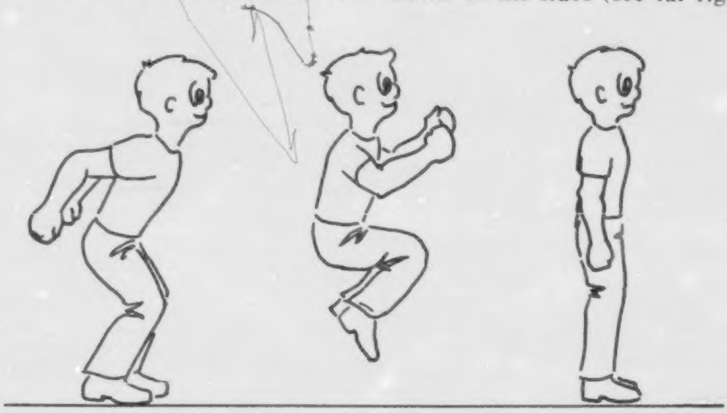


Figure 15

Deviations

Normal arm swing or
up only, back only: (See Figure 15)

The normal sequence of arm swinging is shown in Figure 15. Some children, however, may only do part of the sequence. For example, they may swing their arms back, but not forward and up.

If the child does not do either of the correct arm swings, the item DOES NOT USE ARMS TO HELP is checked.

Uses one arm only:
(See Figure 15)

Figure 15 is the normal sequence of arm swinging while jumping. The teacher will notice that in each position, both arms swing back, forward, or down. Some children, however, use only their right or left arm to swing, leaving the other one hanging or tensed up.

Lands on same foot:
(See Figure 16)

In the beginning of this discussion of the Jumping Checklist, it was mentioned that one of the jumps the child was to do was a one-foot jump. On this kind of jump, the child begins by standing on one foot but is supposed to land on *two* feet. If the child lands on the same foot he started out on, he is hopping not jumping. And this item is checked.

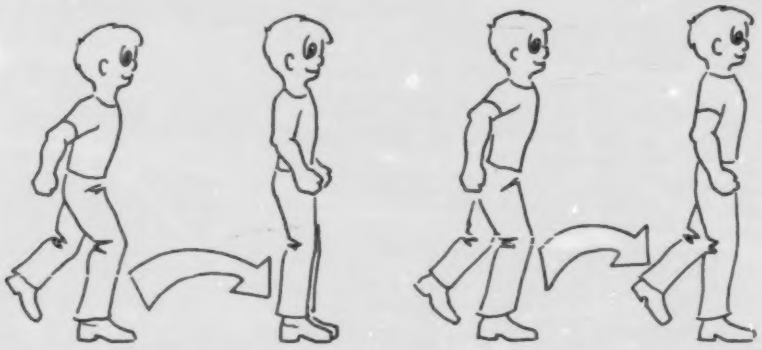


Figure 16

MOVEMENT PATTERN CHECKLIST – HOPPING

Set up a hopping game or ask the child to hop for you. Have him hop both to go somewhere and to stay in place. Ask him to hop on both feet, on one foot, on the other foot, and to hop from one foot to the other and back. Try a definite number of hops on each foot changing feet after a given number (right two, left two, right two, etc.). Note both what he can and cannot do and his ability to perform. Does he land as he should on the same foot, the hopping foot? Does he travel directly to the place he is trying to go or does he stay in place though trying to move forward. Can he hop over a line or low obstacle? Can he hop to a designated spot?

Date ______ Age ______ Sex ______ Name ________________

Pattern Elements Present

- ______Takes off and lands on same foot
- ______Bends ankles, hips
- ______Can do hop on either foot
- ______Hops in straight line
- ______Can hop to the side:
  - _____the same side as the left leg,
  - _____the opposite side of the left leg
- ______Can hop to the side:
  - _____the same side as the right leg,
  - _____the opposite side of the right leg
- ______Alternates feet to count
- ______Double foot hop
- ______Uses arms

Deviations Noted

- ______Loses balance when hopping on the _____right foot, _____left foot, _____when hopping backwards, _______when hopping forwards
- ______Arches back
- ______Twists or bends to the right side, to the _____left side, when hopping on the ______ left foot, when hopping on the _____ right foot, when hopping _____ backwards, _____forwards, ____ to the side
- ______Hops on one foot only:
  - ____left,
  - ____right
- ______Jarring, heavy landing
- ______Can't change pace
- ______Can't do from static position
- ______Uses other foot to assist
  - ____Toes in,_____toes out

Remarks

ITEM DESCRIPTIONS

Hopping Checklist

Below are some possibly confusing items from the Hopping Checklist:

Pattern Elements Present –

Bends ankles, hip:
(See Figure 17)

When a person is asked to balance on one foot, he stands straight with no bending at the hips or ankle. But when he hops he crouches down slightly to spring. So he bends at both the hips and the ankle (like in the diagram at the left side of the figure).

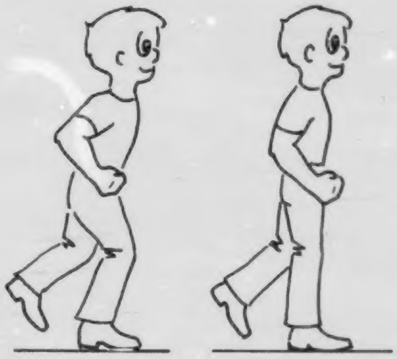


Figure 17

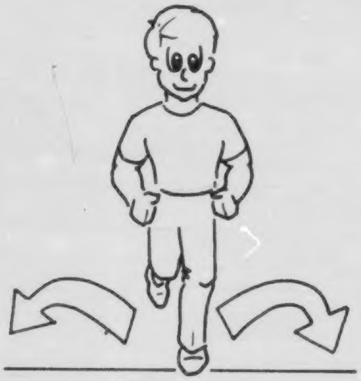


Figure 18

Can hop to side,
opposite or same with left:
(See Figure 18)

The figure illustrates a person balancing on his left (L) leg. Now, he can either hop to the left (*same* side as his left leg) or to the right (the *opposite* side as the leg he's balancing on).

Can hop to side,
opposite or same with right:

This item means the same thing as the one above except that, in this case, the person would be balancing on his right (R) leg instead of his left. And, of course, since he's hopping with his right leg, "opposite" means hopping to the left and "same as R" means hopping to the right.

Alternates feet to
count: (See Figure 19)

An ordinary hop all by itself only involves one foot, the foot on which he's hopping. But the teacher will notice that the Checklist instructions tell him to have the child hop in many different ways. One of these ways is to shift back and forth between hopping on one foot and hopping on the other.

For example, while the teacher counts 1-2-3-1-2-3, the child hops three steps on the right foot, then three hops on the left, and so on.

This is not easy. Sometimes a child will lose his balance and have to put his other foot down when he tries to change feet. And sometimes he will hesitate or stop completely between hop "3" on one foot and hop "1" of the other. Both are incorrect.

Figure 19

Double foot hop:

A double foot hop is just hopping with both feet instead of one foot. It's what a child does when he's imitating a bunny or a kangaroo.

Uses arms: (See Figure 20)

The arms are not used in hopping nearly as much as in jumping. But a person does swing them up and forward sharply just as he springs off the ground (see the middle diagram in the figure). If he does not do that, it is harder to get off the ground.

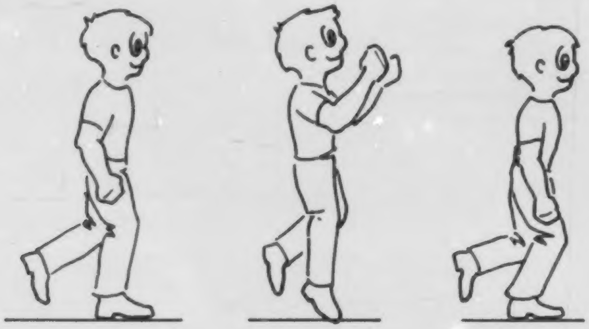


Figure 20

Deviations –

Arches back: (See Figure 21)

In a normal hop, a child starts out with his back pretty straight and keeps it straight through the hop. But some children arch their backs as they hop into the air (see diagram below of figure). This greatly decreases the height and length of the hop. It also ruins the movement of the arms.

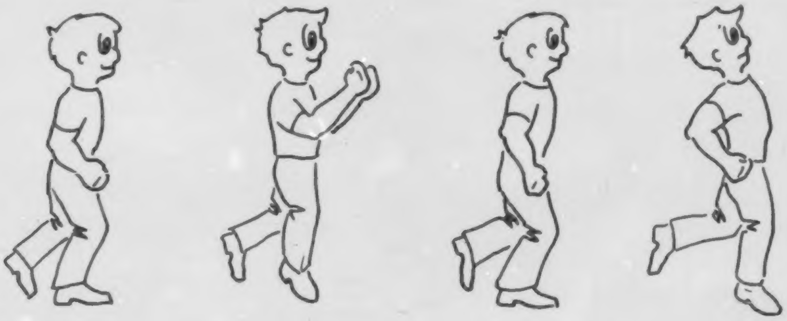


Figure 21

Hops on one foot only.
L R:

This item applies to children who, for some reason, can hop on one foot but not on the other. Most of us have one leg that's stronger than the other (usually the right leg). But we can still hop on the weaker side. However, some children can't hop on their weaker side at all.

Can't do from static
position: (See Figure 22)

The hop, like the standing broad jump, is done from a standing still (static) position. The child balances on one foot and then springs. But some children have to run or walk a few steps first to get enough momentum to get off the ground (see the diagram at the right side of the figure).

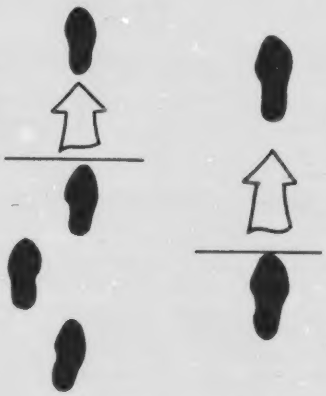


Figure 22

Uses other foot to
assist: (See Figure 23)

A normal hop can be diagramed in three steps as seen at the top of Figure 23. At no time does that other foot touch the ground. But some children put in an extra movement. Right before leaving the ground, the other foot touches the floor to give an extra push to the hop. This is "illegal."

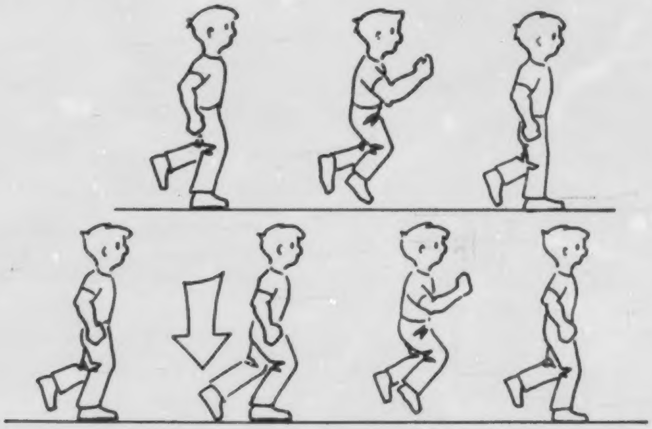


Figure 23

Toes in, toes out
(See Figure 24)

Sometimes a child, when landing, will twist his foot so that, instead of pointing straight ahead, the toes point in or out. This strains the ankle and affects balance.

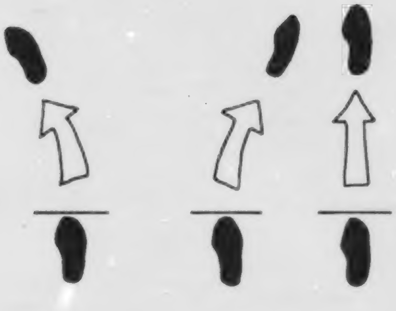


Figure 24

MOVEMENT PATTERN CHECKLIST – SKIPPING

Play a skipping game or ask the child to skip across and around the room. Note whether he skips alternately on either foot equally well. See if he has a definite skip (step-hop) each time. If he has a slight slide at the end of the hop portion of the skip, note it and indicate whether it is consistent. Check for consistency in pattern and rhythm.

Date __________ Age _______ Sex _______ Name ____________________

Pattern Elements Present

______Combines step, then hop
______Alternation of feet
______Opposite arm and leg
______Moves in direct or straight path
______Maintains balance easily
______Can skip forward, ___ in a circle
______Can skip on a straight line, _____on a marked out circle
______Ease and flow of movement

Deviations Noted

______No "true" skip
______"True" skip on one side only: _____left foot, _____right foot
______Jerky
______Extraneous arm movements or ___ doesn't use arms
______Heavy step on landing
______No elevation on hop, _____ shuffles, _____trips, ___ hits one foot with the other
______Uses one arm better: ___ left, ___ right
______Feet cross in front of each other

Remarks

ITEM DESCRIPTIONS

Skipping Checklist

Below are seven items from the Skipping Checklist which need explanations:

Pattern Elements Present –

Combines step, then hop:
(See Figure 25)

Skipping involves both walking steps and hopping in a specific sequence. The child steps forward on the right foot, hops on that foot, steps forward on the left foot, hops on that foot, and so on. If the child does not combine the step with the hop and then change to the other foot, he is not really skipping.

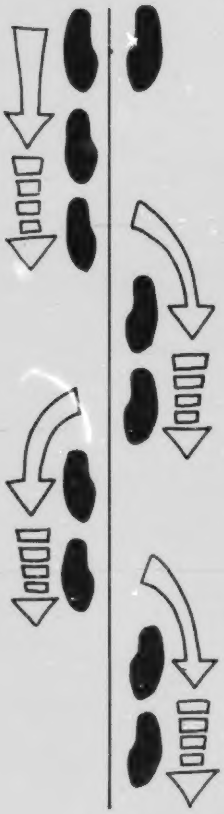


Figure 25

Alternation of feet:
(See Figure 25)

The diagram of normal skipping, shows that there is a constant shifting back and forth between the right foot and the left foot. Unless the child alternates his feet in this regular pattern, he is not skipping.

Opposition arm and leg (up):
(Figure 26)

This type of opposition is similar to all the others that have been discussed. The arms swing freely when the child skips and their position at the hop section of the skip is shown in Figure 26. As usual, if the right leg is swinging forward, the right arm is swinging back and the left arm is swinging forward. On the left leg, it's reversed.

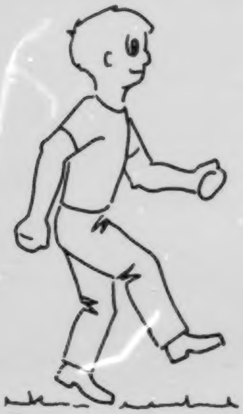


Figure 26

Deviations –

Not true skip
(Step-Hop): (See Figure 25)

Look at Figure 25 carefully. The normal sequence is step-hop, step-hop, step-hop. If the child does not do this, "not true skip" is marked.

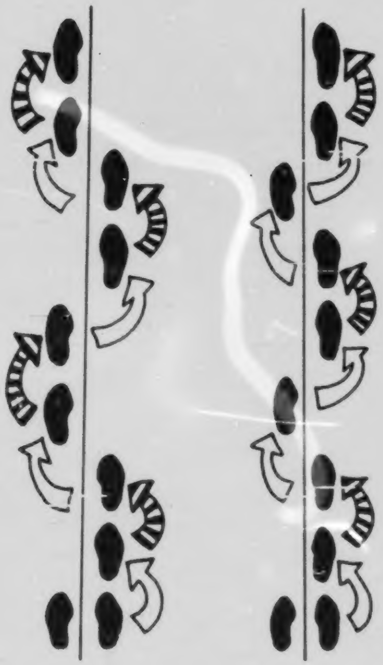


Figure 27

"True" skip one side only,
L R: (See Figure 27)

The left side of the figure shows a child who does a true skip (first the step, then the hop on the same foot) only on one of his feet, the right foot. He leaves out the hop on the left foot. The right side of the figure shows a child who does a true skip on both feet.

Feet cross in front:
(See Figure 28)

The child who crosses his right foot over his left and his left foot over his right each time he changes to a new foot gets so tangled up one wonders how he manages to keep from falling over. As the diagrams on the figure show, the feet are supposed to stay in line with each other rather than crossing over in front.

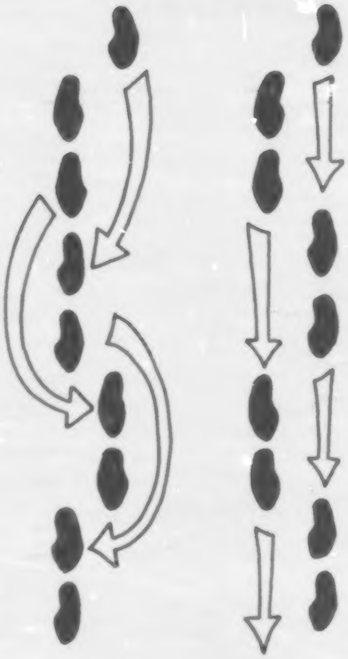


Figure 28

Extraneous arm movements:
(See Figure 26)

Figure 26 shows the normal position of the arms during the hop part of skipping. The arms swing back and forth freely. Some children, however, wave their arms around like a fan at a football game. If the child's arm movements include more than the normal, easy swing, he is using "extraneous arm movements."

On the other hand, some children skip along with their arms held stiffly at their sides, an indication of improper arm movement.

MOVEMENT PATTERN CHECKLIST – THROWING

Try to observe the child in an ordinary or play situation when he is not aware he is being observed. If this differs from the pattern he exhibits when aware he is being checked, note the fact and indicate how it differs. Have him throw objects of different sizes and weights and for different distances. Ask him to throw underhand and overhand as well as sideways with each hand, and with both hands. See if he can throw through the air and also along the ground (with and without a bounce). Give him sufficient variety of types of throws with various objects to note consistency of pattern and extent of versatility Include in throwing a soft or irregular object like a bean bag or sweater as well as more normal objects like a ball. Note whether opposition of arm and leg exists for long throws but not for short, or whether it differs when throwing with right or left hand. Note whether he can throw with a swinging movement as well as with a pushing movement. Can he just push when he uses both hands to throw or can he also perform a swinging two-handed throw? Check his attention to where he is throwing, but do not be especially concerned with accuracy, just with the pattern.

Date ________ Age ______ Sex ________Name ________________

Pattern Elements Present

______Swinging, ______ pushing throws
______Opposition arm and leg with swinging throws, ___ with pushing throws
______Able to throw with left arm, ___right arm ______
______Uses whole body for distance
______Controls object while throwing
______Variety: ____underhand, ______ overhand, ______ side-arm throw
______Similarity of pattern with either arm

Deviations Noted

______No swing with left arm, _____right arm; _____no push with left arm, ____ right arm
______Uses only left side, ____ right side
______Can only throw with both hands grasping the ball
______Loses balance, _____almost
______Jerky or uncontrolled movement
______Gives force only [illegible] arms, ____only with body

Remarks

ITEM DESCRIPTIONS

Throwing Checklist

Here are five items which might be confusing:

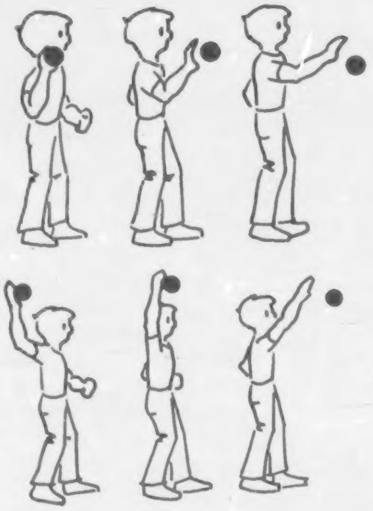


Figure 29

Pattern Elements Present –

Swinging, pushing throws:
(See Figure 29)

In the normal course of development, the child begins with only pushing at the ball. If he's throwing overhand, he raises his arm straight up above his head and sort of "shoves" the ball forward. And the ball plops down to the ground a few feet in front of him. If he's throwing underhand, he lowers his arm to his side and pushes upward.

Later on, however, the child learns to swing his arm back from his body and then swing it forward to deliver the ball. On a pushing throw, there is no backswing.

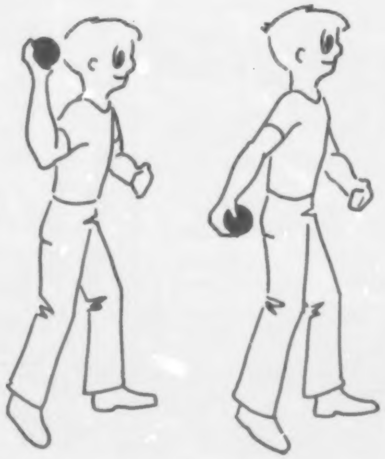


Figure 30

Opposition arm and leg:
(See Figure 30)

In throwing, opposition arm and leg isn't as easy to see as it is in walking or kicking. But it's there. Whether swinging back for an underhand or overhand throw, the leg on the opposite side of the throwing arm is ready to step forward. The same set-up holds for pushing throws, too, although the movement is smaller.

Deviations

Uses only left side,
right side: (See Figure 31)

This item is the opposite of a good opposition arm and leg pattern. As the figure shows, a person who uses only one side of his body to throw is stepping forward on the leg that is on the *same side* as his throwing arm, instead of the leg on the *opposite side* of the throwing arm.

The person in the figure is moving only the right side of his body to throw. The left side isn't being used much to help in the overall throwing movement. The key thing to watch for is if the side of the body opposite the throwing arm is moving.

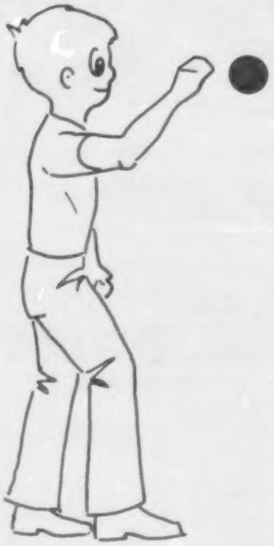


Figure 31

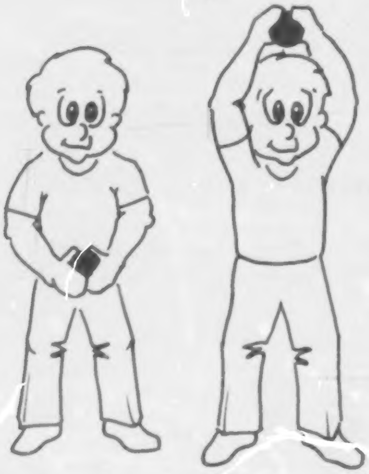


Figure 32

Throws with both arms only:
(See Figure 32)

Ordinarily, the ball is held and thrown with one arm (unless something like a large beachball is thrown). Some children, however, are only able to throw if they hold on with both hands and use both arms. If the child is asked to throw with one arm and he still throws with both arms, this item should be checked.

Gives force only with
arms, body:

This item is difficult to describe, either with pictures or words. Try to imagine a person who moves only his arms to throw: he's standing completely still except for his arms. That person is giving force to the ball only with his arms, Now imagine a person who doesn't move his arms much but who rocks back and sways forward when throwing. That person is using only his body to give force to his throw.

Ideally, both body motion and arm-swinging are used to put force behind the ball. A good example is a baseball pitcher. He uses both a powerful arm-swing and rock-back/sway-forward motion of his body.

Plate 26.12

GROSS MOTOR ACTIVITIES BOOKLET

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From
DeNARDO, CAROL J. *Motor Development from 3 to 6 Years* (unpublished master's paper, The Pennsylvania State University, 1969), pp. 1-24.

POSTURE

Suggested Activities:

Specific Focus: Shoulders Erect

1. Take a few minutes each day to remind the child to stand tall, feet forward, head up. Say it cheerfully, perhaps changing or singing to a familiar tune. Never nag the child or make good posture seem like a chore or reprimand.
2. If possible, take the child swimming. This motion will strengthen upper and lower back largely on his opportunity to learn. Since the motor behavior involved is rather complex, it requires more practice than many other skills.
3. If actual swimming is not feasible, have the child mimic this motion. To do this he should lie prone on the floor and raise his right arm and left leg at the same time. Gradually, work for an increase in the height, number, and speed of lifts. Repeat with the left arm and right leg.
4. Demonstrate proper sitting posture while at the dinner table, in front and back automobile seats, while watching television, etc.
5. Discuss the importance of good posture with the child. Make an impression of this behavior by having him balance a book on his head as long as possible.

Specific Focus: Abdomen Less Protruding

1. All children love to play Simon Says. Utilize this activity to develop firm abdominal muscles. With legs straight, have the child touch toes, stomach, raise hands over head and then back to stomach. Repeat several times. Try it with music.

Suggested Equipment:

1. Plastic swimming pool
2. Floor mat, or Rest and Exercise Mat (No. G48), Creative Playthings
3. Record player
4. Variety of chairs and stools

BALANCE

Level I

Suggested Activities:

Specific Focus: Ability to Erect Self from Squatting

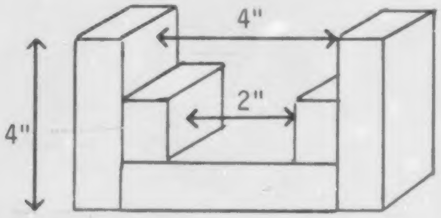
1. Have the child pick up blocks from the floor by squatting down instead of bending at the waist. Once down in this position he must raise himself in a similar manner.

Specific Focus: Balance Board

1. A device which you can construct to help your child learn effective body balance is the balance board. This is a square platform 16 x 16 inches; underneath and centrally located is a 3 inch, 4 inch, or 5 inch wooden cube attached to the board by a wing nut and bolt. In the initial stages the largest cube can be used. Gradually the other sizes should be substituted as poise and confidence are achieved. If the child has difficulty balancing, pin up a picture at his eye level several feet in front of him. Tell him to look at the picture while he is on the board. Balancing is easier if the eyes are held still.
2. Once simple balancing is achieved tell the child to bounce a rubber ball on the floor and then catch it. Begin with a large ball and gradually decrease the size. Let him use both hands at first, then direct him to use only the right or left.
3. While balancing direct the child to throw objects at a target.
4. Suspend a ball by a string from the ceiling so that it swings in front of the child about 2 feet away. Ask him to try and hit the ball as it swings past.

Specific Focus: Walking Board

1. Formal apparatus has been devised for this activity, but a handy teacher can construct his own walking board. Get a section of 2 x 4 about 8 feet long and build a bracket for each end that looks like this:



Children of this age should use the 4 inch surface. The child should be encouraged to start at one end of the board and walk slowly to the other end.

Suggested Equipment:

1. Square platform 16 x 16 inches, 3 inch, 4 inch, and 5 inch wooden blocks.
2. 2 x 4 inch board about 8 feet long; or Climber Set and Walking Board (No. AP83, Creative Playthings).
3. Various rubber balls; beachballs to tennis balls in size.
4. Bean bags and target.

Level II

Suggested Activities:

Specific Focus: Descend Stairs Unaided by Marking Time

1. Send the child on errands up and down stairs. Encourage him to have confidence in his ability and not to be afraid.

Specific Focus: Walking Boards

1. The apparatus for this activity is presented above.
2. If the child is hesitant about walking on the board, hold his hand only for as long as absolutely necessary. Be certain that the child walks rather slowly, instead of running across the board, in order to be certain that balance is actually being tested. Each foot should be placed on the board so that contact is made with each step.
3. Walk backwards on the board.
4. Walk sidewise on the board.
5. Walk to the center of the board, turn around and walk backward.
6. Walk forward (backward) with one foot always in front of the other.
7. Walk forward (backward) with hands on hips.

Suggested Equipment:

1. Square platform 16 x 16 inches; 3 inch, 4 inch, and 5 inch wooden blocks.
2. 2 x 4 inch board about 8 foot long; or Climber Set and Walking Board (No. AP83, Creative Playthings).
3. Various sized rubber balls.
4. Bean bags and target.

Level III

Suggested Activities:

Specific Focus: Descend Stairway on Alternate Feet

1. Gradually lower the body while walking (as going downstairs), and raise again (as going upstairs).

Specific Focus: Walking Board

1. The apparatus for this activity is presented on P. 456.
2. Walk forward and pick up an object from the center of the board (a book, eraser, etc.).
3. Walk forward to the center, kneel on one knee, rise and continue to the end of the board.
4. Walk forward (backward) with a book or block of wood balanced on top of the head.
5. Walk to the center of the board, pick up book or block of wood, place it on top of head, continue to end of the board.
6. Walk forward (backward) and step over a wand held 12 inches above the board.
7. Walk forward (backward) and pass under a wand held 3 feet above the board.
8. Hop on one foot across the board.
9. Walk forward (backward) on board with eyes closed.

Suggested Equipment:

1. 2 x 4 inch board about 8 feet long; or Climber Set and Walking Board (No AP83, Creative Playthings).
2. Various rubber balls.
3. Bean bags and target.

WALKING

Suggested Activities:

Specific Focus: Uniform Walking

1. Have the child walk barefoot through a variety of media – mud, sand, water, dirt, over rocks, cement floors, etc. Discuss the feeling involved with each.

2. The child should walk forward along a measured course which has a definite starting and ending point. His time should be recorded and a chart made of his progress.
3. The child should walk backward following a predetermined course and the time recorded.
4. Have the child walk sideways: First, to the right one step at a time, then crossing left foot over right foot. Repeat moving to the left.
5. Suggest that the child vary his normal walking position: walk with arms out at sides, over head, etc.

Specific Focus: Heel-to-Toe Progression

1. Draw a chalk line on the sidewalk or make a path with 2 boards. Ask the child to try and perform the following skills without deviating from the path:
    a. walk forward
    b. walk backward
    c. walk to the center, turn around and walk backward
    d. walk forward with one foot always in front of the other
    e. walk backward with one foot always in back of the other
    f. walk forward (backward) with hands on hips
    g. walk forward (backward) and pick up a book from the center
    h. walk forward (backward) and pass under a stick held three feet over the line
    i. walk forward (backward) and step over a stick held six inches over the line
    j. walk forward (backward) on the line with eyes closed
2. Draw two converging lines on the sidewalk – twelve inches apart at one end, four inches at the other. The child should walk between them without stepping out.

Specific Focus: Ability to Walk on Tip-Toes

1. Hold a desired object over the child's head, just out of his reach. Tell him to stretch for it on his toes as you move about the room.
2. Toes may be strengthened by using them to pick up marbles. Make a competitive game out of this activity between all of your children; see how many marbles each can pick up and place in a container within a certain time limit. Alternate standing and sitting for variation.
3. Have the child walk high on tip-toes, rocking back and forth.

Suggested Equipment:

1. Stopwatch
2. Two 2 x 4 inch boards about 8 feet long
3. Various sized marbles

RUNNING

Suggested Activities:

1. Measure off a certain distance or course for your child to run. Keep a record of the amount of time it takes him; encourage him to increase his speed.
2. Play "I'm going to get you" with the child; chase him, catch, then tickle. The chase will provide practice in running.
3. Have the child stand in a relaxed stance. Tell him to begin running slowly in palce, and gradually increase speed and then decrease again.
4. Have the child run in place for one minute or two minutes. Run to music.
5. Lay out a maze or obstacle course and keep a record of the time your child takes to run it.
6. When all of your children are gathered together, along with some neighbor children, play Dodge Ball. Half of the palyers form a large circle and the other half stand within it. The players forming the circle have a basketball and try to hit the "dodgers" within. When one is hit, he drops out. When the last one is hit, those who were in the circle become the dodgers.
7. Hide and Seek. One child stands at base and closes his eyes while the others run and hide. Then the child who is "it" looks for the other children, who try to return and touch base without being caught. A milder form of this game can be played indoors on rainy days.
8. Tag One child tags another child and then runs to avoid being tagged in return.

Suggested Equipment:

1. Stopwatch
2. Basketball
3. Record player
4. Various-sized boxes

JUMPING

Level I

Suggested Activities:

Specific Focus: Jumping for Height

1. Face the child and hold hands. Jump together while counting to ten.
2. Have the child jump from a low chair or stool to a chalk line drawn on the floor.

Specific Focus: Jumping for Distance

1. Have the child jump back and forth over a line for a given number of times.
2. Have the child jump back and forth over a line, first on his right foot, then his left.
3. Have the child dramatize nursery rhymes, such as

   Jack be nimble,
   Jack be quick,
   Jack jump over
   The Candlestick.

4. Broad jump. Have the child stand at a chalk line, feet flat and together in a crouched position. Show the child how to swing his arms to gain momentum. For motivation keep a chart of the child's progress.
5. Leap Frog. One child stoops over and each of the others in turn vaults over him. The first one vaulting stops and stoops; the third does the same, and so on until a row is formed. The first who stooped starts the game all over again.
6. Hop Scotch. This game is played on a court marked off in rectangular spaces. A stone is thrown into the spaces in regular order and hopped over.

Specific Focus: Jumping Over Objects

1. Two people should hold a long rope at either end. The child takes position beside the rope and the two people gently swing it back and forth as the child jumps flat footed or with a stepping motion over it. Counting or chanting "Up, up, up" will help to maintain the rhythm.
2. Pull the rope taut and raise it slightly off the ground. Have the child jump over it.

3. Gather a group of children from the neighborhood together and have them form a circle. Have one child stand in the center of the circle and swing a rope with a bean bag attached to the end of it. The children forming the circle are to jump as the bag approaches. Whenever a child fails to jump over the rapidly moving rope he is dropped out of the circle. The child in the center can vary the game by increasing the speed of his movements, or raising the rope higher as he swings.
4. Hold a pole at various heights and have the child jump over it.
5. In spontaneous home play, provide for ample opportunity for the child to jump over boxes, fences, puddles of water, logs, etc.

Suggested Equipment:

1. Various sized strong boxes
2. Various chairs and stools
3. Jump rope
4. Bean bags
5. Long pole
6. Record player

Level II

Suggested Activities:

1. The activities suggested for hopping may be modified to encompass jumping skills.
2. Jump with the body stiff and the arms at the side.
3. Jump and turn in the air – quarter, half, and full turns.
4. Combine jumping with hopping, walking, running, and skipping.
5. Increase and decrease the speed of jumping.
6. Land with feet apart or crossed. Alternate feet forward and back.

Specific Focus: Jump Rope

1. Two people should hold a long rope at either end. The child should start "inside" and jump as the rope is turned a full circle.
2. Have the child turn the rope forward and practice jumping it with a two-footed hop.
3. Let the child practice jumping the rope with a "stepping jump."
4. Jump chants help to maintain rhythm and add interest.

   House for sale,
   Inquire within,
   When I move out,
   Let (name) move in.

Hippity, Hippity, Hop
How many times before I stop?
1-2-3-4-5- (until child misses).

Level III

Suggested Activities:

1. Have child stand on a chalk line, feet flat and together in a crouched position. Show the child how to swing his arms to gain momentum. For motivation, keep a chart of the child's progress.
2. The suggestions listed for hopping can be applied to jumping.
3. Have the child imitate the following animals:
   Snake jump: Crouch in squat position with hands on floor. Jump up with hands outstretched like body of a snake.
   Kangaroo jump: Stand with feet together. Bend the elbows out from the body. Let the hands dangle limply. Do a deep knee bend and jump forward. Repeat three times.
   Rabbit jump: Squat low on heels. Place the hands palms down, fingers pointing toward the floor behind him. In this position, move the hands forward and bring the feet forward between the hands with a little jump. Repeat, simulating a rabbit.

Specific Focus: Jump Rope

1. Have the child increase his speed and practice jumping at varying paces.
2. Jump rope backwards.
3. Have the child move forward as he jumps.
4. Play records of varying tempos to which the child may jump.
5. Both parents should hold the rope at either end:
   a. instruct the child to run through without jumping
   b. run in, jump once, run out; gradually, build up to six consecutive jumps
   c. tell the child to run in backwards and jump.

Suggested Equipment:

1. Jump rope
2. Record player

KICKING

Suggested Activities:

1 Place a large ball immediately in front of the child's feet in a large room or open area Say, "Kick the ball; give it a big kick," or, if necessary, demonstrate
2 The ball may be handed to the child to elicit drop-kicking. This, too, may need to be demonstrated.

Suggested Equipment:

1 Various sized balls

HOPPING

Suggested Activities.

1 Hopscotch This game is played on a court marked off in rectangular spaces A stone is thrown into the spaces in regular order and hopped over.
2 Hop as a bouncing ball; start very high and then gradually reduce the height Reverse the procedure.
3 Hop in one direction crossing back and forth over a line each time
4 Draw a small circle (about 18 inches in diameter) on the floor Hop across it and in and out of it
5 Hop in different figures: circle, triangle, square, etc
6 Alternate big and little hops Form other combinations
7 Hop on one foot a specific number of times and change to the other foot
8 Turn around hopping in place
9 Hop to music

Suggested Equipment

1 Record player

SKIPPING

Level I

Suggested Activities:

1. One child skips around a circle and tags another child's outstretched hands; the child tagged skips after the first child, trying to tag him before reaching the original place of the one tagged.
2. Have the child skip to a table or some other designated goal and retrieve a book, etc.
3. Direct the child to skip in a circle, square, etc.
4. Let the child skip barefoot on grass, dirt, cement, etc. Discuss the difference in textures.
5. Skipping games: Ring Around the Rosie, The Farmer in the Dell, London Bridge, etc.

Suggested Equipment:

1. Record player

Level II

Suggested Activities:

1. To teach a child to skip ask him to take a step with one foot and then take a small hop on the same foot. He now takes a step with the other foot and a hop on that foot. Skipping should be done on the balls of the feet with the arms swung to shoulder height in opposition to the feet.
2. Skip slowly and then increase tempo. Begin fast and decrease.
3. Skip around in geometric figures, i.e., circle, triangle, square, figure eight.
4. Have the child imitate the following animals:
   Frog: Do a deep knee bend with hands on hips. Kick one leg to the side and return. Kick the other leg to the side and return. Skip forward skipping one leg out at a time.
   Crane: Stand erect with one leg off the floor and arms out straight at the sides. Slowly skip about the room, keeping arms out.
   Giraffe: Stand erect with hands held together straight up over the head to represent giraffe's neck and head. Skip slowly forward swaying arms slightly during movement.

Suggested Equipment:

1. Record player

THROWING

Level I

Suggested Activities:

1. Using a sponge or texture ball, toss it to the child and have him throw it back in an underhand fashion. Gradually increase distance. Move to overhand throw.
2. Dodge Ball.
3. Play indoor ring toss games (i.e., quoits, horseshoes, etc.) which require different throwing skills.
4. Have the child throw the ball up in the air, and then try to catch it.
5. Roll rubber balls at a pyramid of blocks.
6. Suspend a hoop and throw balls through it.
7. Have the child toss a large, light balloon into the air and beat it upward with the hand until a miss is made; or bat it downward, striking each time on the upward bounce.
8. Draw marks or circles on the ground. Toss bean bags at the marks or into the chalk circles.

Suggested Equipment:

1. Texture ball (No. B750, Creative Playthings)
2. Ring toss sets
3. Softball, tennis balls, etc.
4. Blocks
5. Hula hoop
6. Ballons
7. Bean bags

Level II

Suggested Activities:

1. Tape a shoe box, which has had the bottom removed, to the wall. Use it as an indoor basketball hoop.

2. Let the child crumple paper into balls and shoot them into a wastebasket.
3. Using plastic milk bottles or cartons stacked in pyramids, have the child try to knock them down with a tennis ball.
4. Throw at a mark or a large circular target on a tree.

Suggested Equipment:

1. Texture ball (No. B750, Creative Playthings)
2. Ring toss sets
3. Softball, tennis balls, etc.
4. Blocks
5. Hula hoop
6. Ballons
7. Bean bags
8. Shoe box, cardboard box
9. Plastic milk bottles or milk cartons

Level III

Suggested Activities:

1. Remove the bottom from a cardboard box and place it on its side. Have the child throw a softball through it without hitting the box.
2. Look for golf ball sized rocks. Hold contests in hitting telephone poles, knocking down tin cans, distance throws, etc.
3. Place a bucket or wastebasket at an appropriate distance for throwing a utility ball, softball, and hard ball. Begin with the bucket on the floor and then place it on boxes and chairs.

Suggested Equipment:

1. Bucket or wastebasket
2. Cardboard box
3. Softball, tennis balls, utility ball, etc.

Plate 26.13

ERIC'S COMPLETED
MOVEMENT PATTERN CHECKLIST – RUNNING

Be sure the situation allows a free run and a sufficiently long running distance. Consider space, clothing, footing, and safety. Have the child run to and away from you as well as past you in each direction. Ask him to run slowly and to run very fast. Use a normal game or play situation if possible. Otherwise, simply ask the child to run enough times and in enough different ways to show the information wanted.

Date 5/2/74 Age 6 Sex M Name Eric T.

Pattern Elements Present

- ✓ Body inclined forward (from ankles up) 1. (see below)
- ______ Unsupported phase (feet off the ground) 2.
- ______ Ball of foot touches first: ___ left, ___ right
- ✓ Arms up and forward 3.
- ✓ Uses both legs equally
- ✓ Uses both arms equally 4.
- ______ Even flow and rhythm 5.

Deviations Noted

- ______ Twists trunk: ___ left, ___ right
- ✓ Flatfooted: ✓ left, ✓ right
- ✓ Heavy landing
- ✓ Body weight, trunk carried forward
- ______ Body weight, trunk carried back
- ______ Flips leg out: ___ left, ___ right
- ______ Exaggerated arm swing

Remarks

1. Too far forward, bends at the waist.
2. He doesn't really leap forward with either foot, he just "walks" very fast.
3. Yes, but clenched and held rigidly at the sides of the body.
4. See No. 3
5. He "lunges" in the direction he wants to go.

Note: With his body bent so far forward, it's amazing he doesn't fall over.

Plate 26.14

ERIC'S RUNNING OBJECTIVES

Objectives:	1. Eric will leap, completely off the ground, for a distance of 2 – 3 feet with each new running step; for a distance of 50 yards with no more than four failures to get completely off the ground and seven failures to leap at least two feet.	2. Eric will land on the ground with the ball of the foot first, for a distance of 50 yards with no more than five errors.	3. Eric will hold his arms up and forward, slightly out from his body and allowing for a 4 – 5 inch forward-back motion.
	Remediation ↓	Remediation ↓	Remediation ↓
Evaluation:	Objective Still Met? Yes	Objective Still Met? No	Objective Still Met? Yes

Plate 26.15

ERIC'S COMPLETED
MOVEMENT PATTERN CHECKLIST – WALKING

If possible observe the child in any normal walking situation being sure he walks enough so all necessary points can be noted. Strive for a variety of walking speeds and purposes. Otherwise, simply ask the child to walk somewhere for you, to walk across the room, away from you, towards you, and around or past you as needed. Suggest he walk over to get something and bring it back to you, rather than just walk. Be sure he is walking on a normal walking surface.

Date 5/2/74 Age 3 Sex M Name Eric T.

Pattern Elements Present

- ____ Opposition leg and arm
- ____ Fluid transfer of weight
- ____ Swing leg through
- ✓ Straight supporting leg[1]
- ✓ Heel strikes ground first[2]
- ____ Body erect, facing forward
- ____ Walks in straight line

Deviations Noted

- ✓ Shuffle, drag feet:
  - ✓ left ____ right
- ____ Jerking: ____ on the left side ____ on the right side ____ up-down
- ____ Leading with a side:
  - ____ left ____ right
- ✓ Jarring or heavy step:
  - ____ left ✓ right
- ✓ Marked swaying:
  - ____ left ✓ right
- ✓ Bends forward ____ leans back
- ____ Hits one foot with other:
  - ____ left ____ right
- ____ Walks on toes:
  - ____ left ____ right

Remarks

[1] Right leg only.

[2] Right foot only.

General: Eric limps on his left foot as if it hurt him, but there is no physical reason for this.

Summary

1. To be considered motor, a behavior must involve muscle movement and the movement must be consciously controlled.
2. The best single reference point for deciding if a child's lack of motor skills is a problem is the child's age. If a child is more than a year behind in the tasks he can perform, the teacher should strive to diagnose the child's problem.
3. The basic tool for diagnosing gross motor problems is observation incorporated with the Diagnostic Teaching Model.
4. A teacher must observe for two types of difficulties [illegible] mastery of the fundamental skills and development of strength and speed.
5. If the child does not achieve the specified objective, and the teacher is not sure what went wrong, the physical education teacher should be consulted.

REFERENCES

Chapter 26

Motor Development

CRATTY, B. J *Developmental sequences of perceptual-motor tasks*. Freeport, Long Island, New York: Educational Activities, Inc., 1967.

DAUER, V *Fitness for elementary school children*. Minneapolis, Minn.: Burgess Publishing Company, 1962.

DeNARDO, C. J. *Motor development from 3 to 6 years*. (Unpublished Masters Paper, The Pennsylvania State University), University Park, Pa., 1969.

ESPENSCHADE, A. and ECKERT, H. *Motor development*. Columbus, Ohio: Charles E. Merrill, 1967.

GARRISON, K. *Growth and development*. New York: Longmans, Green and Company, 1959.

GESELL, A *The first five years of life*. New York: Harper and Brothers, 1940.

GODFREY, B. and KEPHART, N. C. *Motor patterns and motor education*. New York: Appleton-Century-Crofts, 1969.

HURLOCK, E *Child development*. New York: McGraw-Hill, 1956.

ILG, R. and AMES, L. *Child behavior*. New York: Harper and Brothers, 1955.

JOHNSON, B. *Child psychology*. Springfield, Illinois: Charles C. Thomas, 1932.

JOINT COMMITTEE ON LIFETIME SPORTS EDUCATION AND THE PROJECT ON RECREATION AND FITNESS FOR THE MENTALLY RETARDED. *Physical activities for the mentally retarded: Ideas for instruction*, Washington, D.C.: American Association for Health, Physical Education and Recreation, 1968.

LARRICK, N. Guide for selecting toys. *Instructor*, December 1969.

OHRTMAN, W. and KOSOLOSKI, J. E. *Challenge to change*, Harrisburg, Pa.: Penna. Department of Education, 1970.

RADLER, D. with KEPHART, N. *Success through play*. New York: Harper and Brothers, 1960.

RAND, W., SWEENEY, M. and VINCENT, E. *Growth and development of the young child*. Philadelphia: W. B. Saunders Company, 1940.

SIES, A. *Spontaneous and supervised play in childhood*. New York: Macmillan, 1922.

SMART, M. and SMART, R. *Children development and relationships*. New York: Macmillan, 1967.

SPATH, M. *Education in play*. Kirksville, Missouri: The Simpson Publishing Company, 1967.

STRANG, R. *Child study*. New York: Macmillan, 1951.

VALETT, R. *The remediation of learning disabilities*. Palo Alto, California: Fearon Publishers, 1967.

PART VIII

RESOURCES

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV V VI VII **Resources VIII** IX X

CHAPTER 27. USING RESOURCE PERSONS: ROLES, REFERRAL STATEMENTS, AND FOLLOW UP

CHAPTER 28. PARENT EDUCATION PROGRAMS

PREFACE TO CHAPTERS TWENTY-SEVEN AND TWENTY-EIGHT

All the steps of the Diagnostic Teaching Model have been examined, and various means of implementing them have been offered. So now the teacher is ready to conquer the problems of the classroom singlehandedly, right? Wrong, for at any step along the model the teacher may find that he is unable to confidently proceed without the advice or help of an outside source. Part VIII suggests a variety of resource persons a teacher might need to contact, and then examines some specific ways they could be used.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV V VI VII Resources VIII IX X

CHAPTER 27. USING RESOURCE PERSONS: ROLES, REFERRAL STATEMENTS, AND FOLLOW UP

Resource people may be consulted at any step of the Diagnostic Teaching Model.

- All the people in a school and community may function as resource people.
- Availability, scope of information required, and time will limit the number of resource persons the teacher consults.
- A referral is a more formal contact made only after several attempts to use the Diagnostic Teaching Model have failed.

CHAPTER 28. PARENT EDUCATION

CHAPTER TWENTY-SEVEN

USING RESOURCE PERSONS: ROLES, REFERRAL STATEMENTS AND FOLLOW-UP

A resource person may be consulted at any step of the Diagnostic Teaching Model. A resource person can aid the teacher in the identification of relevant characteristics, the specification of teaching goals, the selection of an instructional strategy and management procedure, the selection of instructional materials, the trying out of the strategy and materials, and the evaluation of the child's performance. All of the people listed below may function as resource people.

In the school:

1. the teacher
2. the pupil
3. other pupils
4. other teachers and aides
5. curriculum consultants
6. special education staff
7. administrative staff
8. medical staff
9. pupil personnel services
    a. home visitor
    b. social worker
    c. guidance counselor
    d. early childhood specialist
    e. psychologist
10. non-professionals
    a. janitors
    b. bus drivers

In the community:

1. parents
2. mental health clinic
3. well baby clinic
4. welfare agencies

For a particular child, the teacher may consult with as few as none to as many as all resource people. But it is unlikely that he would consult with all of these people because of the following reasons:

1. Not all of them will be *available* in the school or community.
2. Not all of them will be able to provide the teacher with the specific *information* he is seeking.
3. The teacher does not have enough *time* to consult with all of them.

All the people in a school and community *may function* as resource people, even if they are not listed above. A policeman can serve as a resource person, as can a mailman or a cafeteria worker.

The roles of some resource people overlap. For example, the teacher may not have a social worker at his school, but he may have a home visitor who performs the same functions as a social worker. Any of the resource people may be consulted when a child is experiencing difficulties in the home and/or the community. The teacher may not have available to him a special education staff member, however, a psychologist or curriculum consultant or early childhood education specialist may be able to serve as a resource person. These resource people can aid the teacher in the educational programming of a child. The nature of the information the teacher is seeking will determine the way in which available resource persons will provide assistance.

Referral and Follow-Up Procedures

Very often contacts with most resource people are rather informal – a telephone conversation, a meeting after school or in the teacher's room when a question is asked and the answer is quite brief.

A more formal contact, a *referral,* is usually completed only in the event of several unsuccessful attempts to use the diagnostic teaching process. If a referral is needed, the teacher should document all the information already accumulated about the child and should forward this information with the referral by using a form such as the *Teacher Referral Statement* (Plate 27.1).

When does the teacher complete the *Teacher Referral Statement?* He completes the *Teacher Referral Statement* when a referral is initiated. This is done when he has exhausted all known strategies in modifying a child's educational program and he has consulted informally with some possible and relevant resource people

How does the teacher complete the *Teacher Referral Statement?* If he finds he is lacking information and cannot complete parts of the referral form, he should make arrangements to collect the needed information. The procedures used for gathering data about children were presented in Chapters 9, 10 and 11.

Plate 27.1

TEACHER REFERRAL STATEMENT

Name of Child: ____________________ Date of Report: ________

Birthdate: ____________________ Sex: ____________

Teacher: ____________________ Grade: ____________

I. Achievement Data

Describe the child's *typical* performance in each area. Use behavioral terms so that the description is precise. Attach samples of the child's work where applicable. Cite any available test results.

A. Oral Language ______________________________

____

Written Language ______________________________

____

B. Reading Comprehension ______________________________

____

Word Analysis Skills ______________________________

____

C. Mathematical Comprehension ______________________________

____

Computation Abilities ______________________________

____

D. Music ______________________________

____

Art ______________________________

____

Dramatic Play ______________________________

____

E. Other ______________________________

____

Name of Child:____________________________

II. Learning Behaviors Checklist

Place a check mark next to the statements which describe behavior *usually* exhibited by the child. Use the comment space to elaborate on your choices and to provide supporting information.

A. Behavior Related to Inputs

_____is attentive during most activities

_____is attentive only during his favorite activities

_____rarely pays attention

_____indicates a preference for material received through the auditory channel

_____indicates a preference for material received through the visual channel

_____does not indicate a preference for one input channel over another

_____performs better when information is received through the auditory channel

_____performs better when information is received through the visual channel

_____performs better when he receives information through a combination of visual and auditory channels

_____ is able to use tactile sensations

_____exhibits unusual behavior during activities which require good hearing

_____exhibits unusual behavior during activities which require vision

Comment:

B. Behaviors Related to Information Processing

_____organizes tasks and materials so that time is used efficiently

_____has short-term retention for most learning areas

_____has long-term retention for most learning areas

_____can recall information for only some selected learning areas

_____does not remember information

_____discriminates between sounds

_____discriminates between shapes and figures

_____discriminates between letters, numbers, words

_____can make associations

_____can make generalizations

_____can differentiate between generalizations and specific facts

_____translates from concrete experiences to abstractions

_____is able to profit from incidental learning

_____finishes (or attempts to finish) tasks he starts

_____completes only those tasks he enjoys

_____is easily distracted regardless of task

_____follows instructions directed to a group

_____follows instructions directed to him individually

_____follows one direction but not a sequence of directions

Comment:

Name of Child:

C. Behaviors Related to Outputs

______volunteers comments, answers, etc., during group activities

______speaks spontaneously on a one-to-one basis to other child and/or adults

______speaks only when called on or when conversation is initiated by another person

______must be urged to speak

______shows specific speech problem (describe)

______ performs gross motor skills in coordinated fashion

______ performs fine motor skills in coordinated fashion

______is clumsy and awkward in most motor activities

______exhibits involuntary repetition when making a motor response

______exhibits involuntary repetition when making a spoken response

______uses a vocabulary typical of older children

______uses a vocabulary typical of children his age

______uses a limited vocabulary

______uses compound and complex sentences

______uses only simple sentences

______uses single words and some phrases, but not complete sentences

______reverses some letters and/or numbers when writing

______prefers right hand for most activities

______prefers left hand for most activities

______uses either hand with about equal dexterity

Comment:

Name of Child:________________________________

D. Behaviors Related to Feedback
(place a check mark next to the events which are rewarding for the child.)

_____consumable rewards such as candy

_____tangible rewards such as tokens which can be traded for food, prizes

_____physical attention such as a hug, a pat on the back

_____symbolic rewards such as grades, stars

_____competitive rewards such as being named the winner

_____comments of approval (verbal praise) from an adult

_____comments or indications of approval from peers

_____opportunities to pursue activities of his own choosing

_____knowledge of results such as being told an answer is correct

Place a check mark next to statements which apply to the child.

______exhibits a strong preference for a certain type of reward; if so, specify

______does not display a preference for any one type of reward but works well for a variety of rewards

______needs to be rewarded several times during completion of a task

______can delay receiving reward until completion of task

______can delay receiving reward until several tasks are completed

Comment:

Name of Child: ______________________________

III. Physical Symptoms Checklist

Place a check mark next to the statements which apply to the child. Use the comment space to elaborate and provide supporting information. Attach any medical reports which are available.

_____is often absent

_____is usually tired

_____is overly active

_____is listless, lethargic

_____is underweight

_____is overweight

_____complains of headaches, dizziness

_____has unusual posture when doing visual tasks

_____has unusual posture when standing

_____has unusual gait

_____appearance of eyes is abnormal

_____has frequent earaches

Comment:

Name of Child: ______________________________

IV. Social-Emotional Behaviors Checklist

Place a check mark next to the statements which apply to the child. Use the comment space to elaborate and provide supporting information. Attach parent conference reports, if any:

____prefers working with others

_____prefers to work by himself

_____exhibits about equal willingness to work with others and alone

_____gets along with others in work situations

_____gets along with others in play situations

_____refuses to participate in group activities

_____adapts easily to changes

______needs to be carefully prepared and gradually introduced to change

______behavior in group activities is predictable

______is more easily excited than others his age

______has temper tantrums (kicks, screams, beats on floor, etc.)

______makes a deliberate attempt to be by himself

______exhibits an unusual amount of persistence

______gives up and moves to another activity when he experiences difficulty

______is aggressive (fights, kicks, hits, verbal insults, etc.)

Comment:

To whom does the *Teacher Referral Statement* go, and what is done with it? Referrals are usually forwarded to a central place. The exact procedures vary from school to school. However, one person (often the principal or director) usually accepts all referrals and then sends the referral request on to the appropriate resource person depending on the availability of the resource person and the nature of the information requested on the referral. The resource person who receives the referral may, in turn, assign the case to some other member of his team to continue the diagnosis. The referral procedure continues in this manner, with each resource person involved in the case making a decision about whether to involve any other resource person.

What does the teacher do with the child *during* referral? He continues to use the diagnostic teaching process and continues to make modifications in the child's educational program during the process of diagnosis by specialists.

What does the teacher do with the child *after* the referral has been completed? There are several procedures for him to follow. He will want to look carefully at information he gathered *before* the referral and *during* the referral to see how it fits in with information gathered and decisions reached by the referral specialists. He will usually have a conference with the referral team or a designated specialist concerning the additional data which he has collected and the data collected during the referral process. Finally, he will want to go through the diagnostic teaching process with the two new kinds of data, that which the teacher has collected during referral and that which the referral team has collected

Summary

1. A resource person, any person in the school or community having contact with the child, may be consulted at any step of the Diagnostic Teaching Model
2. Availability, type of information required and time will limit the number of resource persons the teacher consults.
3. Most contacts with resource persons are informal. A *referral* is a more formal contact made only after several attempts to use the Diagnostic Teaching Model have failed.
4. A teacher must thoroughly document all aspects of the child's behavior when making a referral.

REFERENCES

Chapter 27

Resource Persons and Their Roles/ Referral and Follow-up Procedures

ASSOCIATION FOR SUPERVISION AND CURRICULUM DEVELOPMENT *Evaluation as feedback and guide*. Washington, D.C.: ASCD, 1967.

AVILA, D. L., COOMBS, A. W. and PURKEY, W. W. (Eds.). *The helping relationship sourcebook*, Boston: Allyn and Bacon, 1971.

CARTWRIGHT, G. P., CARTWRIGHT, Carol A. and YSSELDYKE, J. E. Two decision models: Identification and diagnostic teaching of handicapped children in the regular classroom. *Psychology in the Schools*, 1973, 10, 4-11.

CATTERALL, C. D. Increasing innovation and behavioral change through collaboration with a school staff. *Journal of School Psychology*, 1970, 8, 215-219.

COOMBS, A. W., AVILA, D. L. and PURKEY, W. W. *Helping relationships*. Boston: Allyn and Bacon, 1971.

CRUICKSHANK, W. M. *Psychology of exceptional children and youth*. Englewood Cliffs, New Jersey: Prentice-Hall, 1971.

EBERT, D. W., DAIN, R. N., and PHILLIPS, B. N. An attempt at implementing the diagnostic-intervention class model. *Journal of School Psychology*, 1970, 8, 191-196.

GORMAN, A. H. *Teachers and learners: The interactive process of education*. Boston: Allyn and Bacon, 1969.

HAMMILL, D. D. and BARTEL, Nettie. R. (Eds.) *Educational perspectives in learning disabilities*. New York: John Wiley and Sons, 1971.

LERNER, Janet, W. *Children with learning disabilities*. Boston: Houghton Mifflin, 1972.

MAGARY, J. *School psychological services*. Englewood Cliffs, New Jersey: Prentice-Hall, 1967.

PHILLIPS, B. N. The teacher-psychological specialist model. *Journal of School Psychology*, 1967, 6, 67-71.

SMITH, R. M. *Teacher diagnosis of educational difficulties.* Columbus, Ohio: Charles E. Merrill, 1969.

TARNOPOL, L. *Learning disabilities.* Springfield, Illinois: Charles C. Thomas, 1969.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

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CHAPTER 27. USING RESOURCE PERSONS: ROLES, REFERRAL STATEMENTS, AND FOLLOW UP

CHAPTER 28. PARENT EDUCATION provides a bridge between the early experiences children have at home with parents and their later schooling.

- Parents are a child's first teachers. Five categories of mothering styles have been recognized: super mother, smothering mother, almost mother, overwhelmed mother, zoo-keeping mother.
- The types of parent programs that emerged from Head Start are labeled according to their perspective towards children's needs: Deficit Model, Schools-as-Failure Model, Cultural Difference Model, Social Structural Model.
- Organized Parent Education programs are described in terms of parent roles: bystanders, learners, teachers, aides, policy makers.

CHAPTER TWENTY-EIGHT

PARENT EDUCATION

Psychologists and educators have long been concerned with the effects of early home experience on children's development. Recent public interest in early childhood education has focused much attention on the home and its role in relation to formal education programs for young children. Parents have not been, as a group, especially alert to the later educational significance of young children's early home experiences. Parent Education programs are the bridge between the early experiences children have at home with parents and their later schooling.

Psychologists, spurred by the public attention and federal funding of research with young children, have conducted an increasing number of studies with very young children. The results of many of the studies have changed some of the traditional ideas about the capabilities of young children.

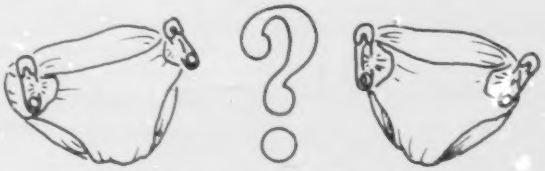


Plate 28.1. A CHANGE OF IDEAS

For example: it has been established that babies can indeed see. Further, babies spend a great deal of their waking time looking and staring at people and objects in their environment.

Another common idea about babies is that all babies do the same things. The chapters on Child Development discuss the notion of individual differences and individuality in great detail. In reference to babies, those chapters noted that babies have limited capabilities and therefore cannot be expected to do many things. Recent research has not contradicted the idea of limits, but has underscored the fact that different babies can do different things. Babies are individuals even as newborns.

Other evidence from studies with young children has supported the idea that babies can learn before they begin to talk, that talking to babies can stimulate their later verbal and language development, and that babies need physical affection and contact to develop normally. A competent baby is one whose actions meet his needs: cries when hurt, smiles when pleased, sucks when hungry and sleeps when tired.

Parents Are Teachers

Parents are the child's first teachers. In this society the mother by virtue of the greater amount of time she spends caring for a child, is the child's first and most important teacher. That mothers care for children or are caregivers is obvious. However, recent observations of mother-child interactions have resulted in the classification of mothers' caregiving techniques into five categories of mothering-style.

Super Mother	is a consultant and resource
Smothering Mother	has children who are dependent on adults
Almost Mother	is *not* a mind-stretcher
Overwhelmed Mother	cannot cope well with the demands of the child
Zoo-keeper Mother	is well-organized and efficient, but tends to keep child confined

At the same time psychologists were establishing the dimensions of different mothering styles, educators were confronted with the need to deal with very young children in formal school situations. Head Start was the first massive effort to reach the children of poverty. Program models were developed and implemented based upon a variety of notions about the most effective teaching methods, the most critical objectives, and the most pressing societal needs.

Parent Involvement

From the beginning Head Start contained a provision for parent involvement in programs. The types of parent programs which emerged from Head Start can be labeled by the perspective or viewpoint that each program demonstrated concerning the needs of the children of poverty the program was to serve. Four identifiable perspectives have served to label most of the programs which emerged.

1. Deficit Model — assumes deficiencies in a child's preschool environment and attempts to remedy or remove them.
    - Child lacks experiences
    - Slow skill development
    - Child is misfit in school
    - Cumulative deficit

2. Schools as Failure Model — recognizes child and his community must be viewed as worthwhile resources.
    - School isn't tuned into child
    - School isn't responsive to local need
    - Teachers are inadequately trained
    - Subject matter is meaningless

3. Cultural Difference Model — recognizes and values the culture of the child.
    - Child's world differs from middle class
    - Child's culture is strong
    - Children can deal with cultural pluralism

4. Social Structural Model — perceives the community as the focal point.
    - Child and family are part of larger unit called society
    - Change in child can be accomplished by involving the social structure in which the child lives.

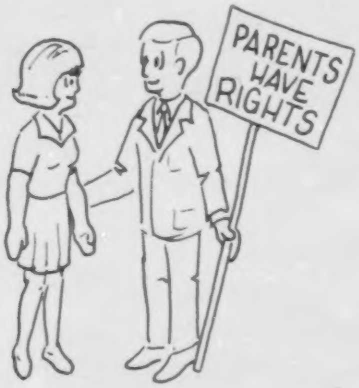


Plate 28.2. THE PARENTS' POSITION

Plate 28.3

PARENT EDUCATION PROGRAMS

Program Objectives – Trial One

1.

2.

3.

4.

5.

6.

7.

8.

Program Objectives – Trial Two

1.

2.

3.

4.

5.

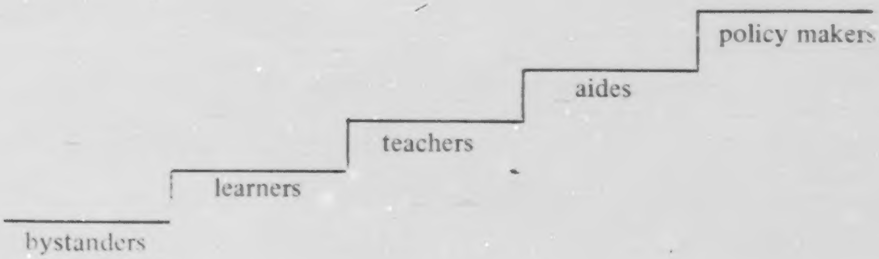
6.

7.

8.

Parent involvement in early childhood programs has previously been indirect. That is, parents were involved and informed of school activities through their children. The aim of present parent education programs is to involve the parent directly with the program. This has required a redefinition of the PARENT – TEACHER link.

Roles Parents Can Play



Presented above in the staircase continuum are five types of parent roles. The order represents the degree of educational relevance (direct involvement with school programs) in the activities related to each role.

Organized Parent Education Programs

1. *Parents as bystanders.* Parents as bystanders have the least direct impact on their child's educational experience. They may watch or observe their child, but nothing the parent does will alter the educational program in which the child is participating. Parents may provide supportive services such as babysitting and attending conferences with teachers.

Example:
Pennsylvania Preschool and Primary Project
Harrisburg, Pa.
B. McInerrey, Director

During the 1968-69 school year, one urban and one rural school district were involved in this program. The aim of the program was to change parent attitudes and behaviors to exert positive influences on their children's education.

The rural school parent program involved general meetings for parents and distribution of pamphlets. Some parents worked as cafeteria aides or volunteered to help in the classroom.

In the urban parent program, the parents had field trips, clothing exchanges, and domestic skill classes. Some parents became involved in community issues. Parents observed children's classes and assisted with field trips.

This project was reported in *Parent participation in preschool day care* by Hoffman, Jordan, and McCormick.

2. *Parents are learners.* Parents as learners are assumed to need to improve their child-rearing skills. The school or educational program sees its role as one of teaching parents better skills and more appropriate child-management procedures.

Example:
Project Child
City University of New York
Helen Robison, Director

This parent project began operating in January 1969. Goals of the project were to teach parents about the curriculum their children were exposed to in school. Hopefully, they would then be able to help their children at home in ways which would reinforce the school curriculum.

Participating parents were predominantly black with some Puerto Rican families. Two hour weekly meetings were held for four months. Mothers were paid $2.00 per hour and babysitting services were provided.

The weekly sessions were devoted to studying the curriculum and teaching strategies used in the preschool program the children attended. Information about community agencies was also disseminated.

Parent involvement in the preschool program soon extended beyond the role of learners. Parents made story tapes and puppets for use in the classroom. Parents began to help teachers select culturally relevant material for the classroom.

This project was reported in *Parent participation in preschool day care* by Hoffman, Jordan, and McCormick.

3. *Parents as teachers.* Parents who are teachers are actively involved in educational activities with their children. Typically this involvement takes place at home. Parents are trained to purposefully take advantage of the time they spend with their children while the children are still too young to attend formal educational programs

Example:
Florida Project
Gainesville, Florida
Iva Gordon, Sponsor

The Florida project tries to react to disadvantaged children while they are still very young. Teaching occurs both in the home and in the school. A Parent Educator serves as a link between home and school.

Trained by program staff, the Parent Educator works in the classroom and then visits the homes of the children to instruct the mothers to teach their children.

At home, the mother teaches her child. She learns from the Parent Educator what kinds of activities and materials to use. Mothers are encouraged to talk frequently to their children.

This project was reported in *Experiments in primary education* by Maccoby and Zellner.

4. *Parents as aides.* Parents who are aides work in classrooms, directly with children, participating in educationally relevant activities with the children. Parents and teachers do not automatically function as a team. Time and effort must be spent in adequately training aides and in helping teachers adjust to aides in the classroom.

Refer to the program description of the Florida Project under Parents as Teachers. Those parents who serve as Parent Educators are classroom aides. They are trained by teachers and other staff to work in the classroom.

5. *Parents as policy makers* Despite differences in skills and education, most experts feel that parents can become effective policy makers for early childhood programs. Parents who are involved in decision making and policy making are most likely to be committed to the educational program in which their children participated

Example:
Central School
Cambridge, Massachusetts
A. S. Pershouse, Director

Central School enrolls approximately 32 preschool children. A Policy Board comprised mainly of parents runs the school and makes all major decisions. Parents hire teachers, purchase equipment, work on classrooms, and have helped remodel the physical plant.

The total parent body has a vote on all major policy decisions. In addition, parents have begun projects such as trips, rummage sales and a community free store for their own benefit.

This project was reported in *Parent participation in preschool day care* by Hoffman, Jordan, and McCormick.

Summary

1. Parent Education programs, which are the bridge between the early experiences children have at home with parents and their later schooling, are the result of recent public interest in the home and its role in relation to formal education programs for young children.
2. Recent observations of mother–child interactions have resulted in the classification of mother's caretaking techniques into five categories:
   a. Super mother
   b. Smothering mother
   c. Almost mother
   d. Overwhelmed mother
   e. Zoo-keeper mother
3. Headstart, the first massive effort to reach the children of poverty, provides for parent involvement programs based on the needs of the children. The programs can be characterized by the model they follow:
   a. Deficit model
   b. Schools as failure model
   c. Cultural differences model
   d. Social structural model

4. The aim of the present parent education programs is to directly involve the parent at one of the following levels, which are listed from least to most important involvement:
    a. Bystanders
    b. Learners
    c. Teachers
    d. Aides
    e. Policy makers

PHOTOGRAPH ACKNOWLEDGMENTS

The Day Care and Child Development Council of America (DCCDCA) granted permission for several of their photographs to be used on the CARE 2/3 image reel. These photographs were used in the exercise in which you studied pictures and developed program goals. Some photographs were selected from the DCCDCA Photo File, while the others were taken by DCCDCA photographers: Robert Adelman, Michael D. Sullivan, Bruce Roberts, and Gini Hubbard.

Documentary Photo Aids, Sarasota, Florida, also granted permission for pictures to be photographed for the image reels. These photographs were taken from *Negro Experience in America, Part II.*

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REFERENCES

Chapter 28

Parent Education Programs

BEAR, R. M. Issues in early learning and preschool education: A summary of the conference discussions. In R. D. Hess and R. M. Bear (Eds.). *Early Education*, Chicago: Aldine, 1968.

BELLER, E. K. Adult-child interaction and personalized day care. In E. H. Grotberg (Ed.) *Day Care: Resources for Decision*, OEO, 1971, 229-264.

CHILDHOOD EDUCATION. *Learning from parents*, 1971, 48, No. 3.

FREEBERG, N. E. and PAYNE, D. T. Parental influence on cognitive development in early childhood: A review. *Child Development*, 1967, 38, 65-87.

GORDON, I. J. *Parent involvement in compensatory education*. ERIC Clearinghouse on Early Childhood Education, University of Illinois Press, 1968.

GORDON, I. J., et al. *Reaching the child through parent education: The Florida approach*. Gainesville, Florida: Research Reports Institute for Human Development, University of Florida, 1969.

HESS, R. D., et al. Parent involvement in early education. In E. H. Grotberg, (Ed.). *Day Care: Resources for Decision*, OEO, 1971, 264-298.

HESS, R. D., BECKUM, L., KNOWLES, R. T., and MILLER, R. Parent-training programs and community involvement in day care. In E. H. Grotberg (Ed.)., *Day Care: Resources for Decision*, OEO, 1971, 299-312.

HOFFMAN, D. B., JORDAN, J. S. and McCORMICK, F. *Parent participation in preschool daycare*. Monograph No. 5, Atlanta: Southeastern Educational Laboratory, 1971. ERIC ED 054 863.

MACCOBY, E. and ZELLNER, M. *Experiments in primary education: Aspects of Project Follow-through*. New York: Harcourt, Brace, Jovanovich, 1970, 12-13.

PINES, M. A child's mind is shaped before age 2. *Life*, December 17, 1971, 63-90.

SPODEK, B. Working with parents. In B. Spodek, *Teaching in the Early Years*, Englewood Cliffs, N. J.: Prentice-Hall, 1972, 255-271.

TIP. *Parents are Teachers*, 1972, 11, No. 3.

PART IX

DAY CARE

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

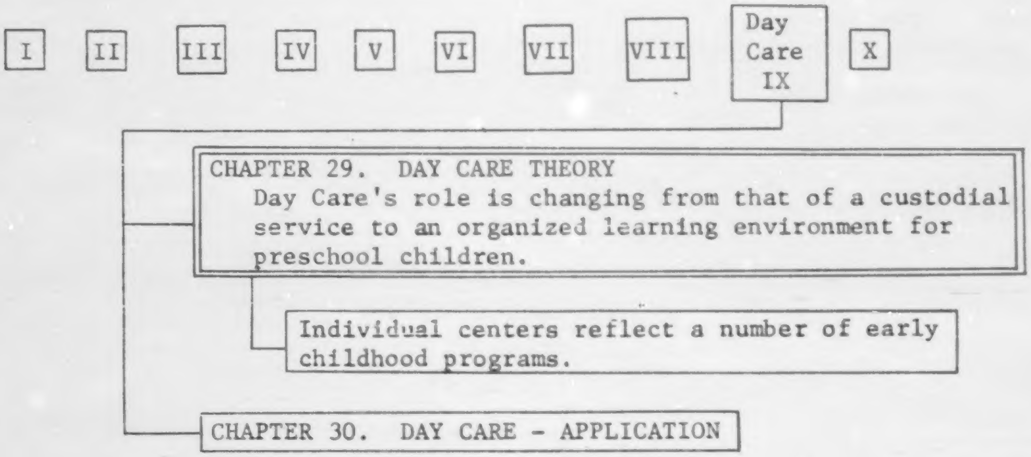
I II III IV V VI VII VIII Day Care IX X

- CHAPTER 29. DAY CARE - THEORY
- CHAPTER 30. DAY CARE - APPLICATION

PREFACE TO CHAPTERS TWENTY-NINE AND THIRTY

Day care has long been a second-class citizen in the educational world. Recent events have prompted a closer look at day care and the services it does and can offer very young children. Consequently, day care's image has been changing and is now taking a front row seat among the programs and services which are being financed and implemented for very young children in the seventies.

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN



I II III IV V VI VII VIII

Day Care IX

X

CHAPTER 29. DAY CARE THEORY

Day Care's role is changing from that of a custodial service to an organized learning environment for preschool children.

Individual centers reflect a number of early childhood programs.

CHAPTER 30. DAY CARE - APPLICATION

CHAPTER TWENTY-NINE

DAY CARE THEORY

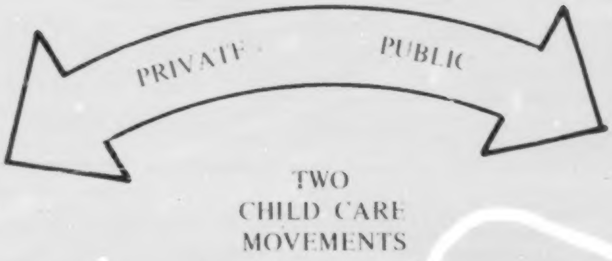


Plate 29.1. DEVELOPMENT OF CHILD CARE PROGRAMS

Public Child Care Movement

Two separate but parallel child care movements have existed in this country. The public child care movement has traditionally been the sponsor of day care services. Public day care was seen as a service provided for families who had problems and could not provide or afford care for their young children. Day care has long been tied to the child welfare and social work agencies in local communities. Early day care services were primarily custodial in nature, providing a warm, safe, supervised place for young children, but not much more.

Private Early Education Programs

In contrast, the private early education programs were geared to provide educational and enriching experiences. Today, the division between these private educational programs and day care services is blurring. But before day care as it is today is examined, a brief survey of the history of early childhood educational programs will give a perspective from which to look at the emerging trend of *developmental* day care programs.

Early Philosophers

Three early educational philosophers are important to the development of educational programs for very young children. None of these men taught young children, nor did they specify in detail programs for very young children. It is their thoughts on the education of young children which are important, for their ideas influenced men who later actually did implement early childhood programs.

Aristotle	Aristotle was concerned with the liberal education of men. While he did not have much to say about the education of men who were not free and although he said nothing about the education of women, he did strongly favor the education of the child. Education should begin early as the child is the father of the man.
Comenius	Comenius was one of the first educational thinkers to favor grouping children. He advocated an age-graded or grouped class of children. Education and materials could then be made to suit the children in each group.
Rousseau	Emile, the subject of Rousseau's book, was described as a flower unfolding into adulthood. The message here was that each child is unique and that children are different from adults. He dashed forever the idea that a child is nothing but a miniature adult.

Much later in time, two European men whose thinking and practices did involve young children drew upon the ideas of these earlier thinkers. These two men are thought of as the founders of early childhood education.

Johann Pestalozzi (1746 – 1827)

Pestalozzi was a great teacher. He inspired those he taught to achieve their best and to enjoy life. Pestalozzi left a body of writings in which he tried to set down his beliefs and skills in teaching; but from the writings of those who knew him, he did not succeed. His own personal presence was far more influencing than any of his writings. He actually ran schools for young children, and those who wanted to learn from him came and worked at these schools with him. One of these pupils was Fredrick Froebel.

Fredrick Froebel (1782 – 1852)

Froebel, inspired by his one-time teacher, Pestalozzi, also opened his own schools for young children. He established a curriculum which consisted of gifts and occupations. In his writings he prescribed how these gifts and occupations were to be introduced and used with the children. He also began the time-honored custom of circle time in which all the children sat in a circle around the teacher for sharing. Froebel is generally recognized as the father of the kindergarten. One of his pupils was a Mrs. Carl Schurz of Watertown, Wisconsin. She studied in Germany with Froebel and upon returning to this country, set up her own kindergarten. Early kindergartens in America were modeled after Froebel's teaching for some time to come.

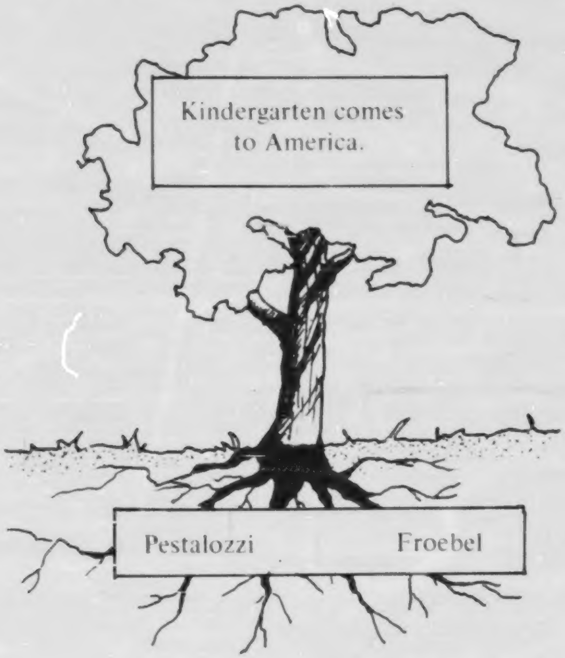


Plate 29.2. INFLUENCES ON KINDERGARTENS

One of the early and influential American training and observation schools for teachers was The Bank St. College of Education. Others were the Ruggles Street Nursery School, the Iowa Child Welfare Station and the Yale Guidance Nursery. At this time, play was the prime activity in early childhood programs. Play was considered the activity through which social and emotional growth could be fostered.

Changes in Private Child Care Movement

People's goals and desires change over time. Likewise, the private child care movement began gradually to place less emphasis on social and emotional growth in the child and more emphasis on cognitive development.

In Italy, Maria Montessori had been operating programs for young slum children in an effort to enrich their lives. Montessori concentrated on the cognitive skills children would need as adults. Her materials were concrete, sensorimotor stimuli for this cognitive growth. In the early nineteen-fifties, Americans began to show interest in her methods and curriculum. Montessori programs began in this country, not for the children of the poor, but as programs that were part of the private child care movement.

Social concern in this country has begun to focus on the children of poverty. Federal funding has helped to support the kinds of educational programs for poor children that previously had only been available to children whose families could afford to pay. Head Start has resulted in a large number of early childhood programs variations, each with its own goals, objectives, and philosophy.

Plate 29.3

EARLY CHILDHOOD PROGRAMS

BEHAVIORAL	COGNITIVE	NORMATIVE
Bushell	Weikart	Bank St.
Engelmann-Becker	Nimnicht	Gordon
Resnik		Head Start

↔

Montessori
British Infant School

Developmental Day Care

Developmental day care is the name given to the new program thrust which has resulted from the merging of public day care services and private program variations. Two forces seem to be operating in society today which have accounted for the push for developmental day care programs.

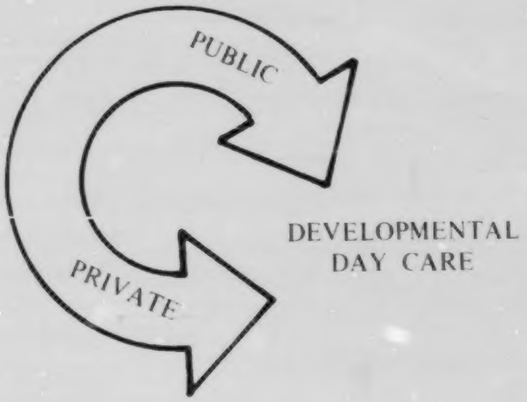


Plate 29.4. MOVEMENT TOWARD DEVELOPMENTAL DAY CARE

During the second World War, many mothers were in the work force. Day Care programs were needed to free these women to work. When the war was over, women returned to their homes and day care services were not needed. Today, women are again returning to the work force. Many of these recent working mothers are professionals or members of the class that in other times would have sent their children to private programs. Their place in the work force is likely to be permanent, and day care services are once again being needed in large numbers for the children of working mothers. Consequently, mothers are demanding that day care become more than just custodial care.

The recent federal push for programs for the poor resulted in massive attempts to reach the poor through their children. It is now thought that intervention in the cycle of poverty and substandard living must begin earlier than the age at which most children are enrolled in preschool programs. Thus, day care programs offer an opportunity to intervene and reach the children of the poor at an even earlier age.

To this end, federal legislation has been written for widespread federal financing of day care services. Local congressmen are the best source for information on the status of any current legislation. Several states have also passed funding legislation for day care programs.

A general issue in the development of programs for day care centers has been the extent to which ethnic differences should be incorporated into the program.

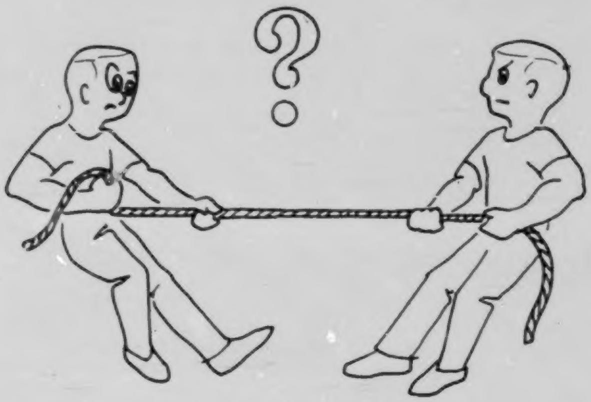


Plate 29.5. ATTENTION TO ETHNIC DIFFERENCES

Two points of view currently exist concerning this issue. One point of view states that ethnic differences should be ignored, that efforts should be made to concentrate on the ways in which children are alike regardless of their ethnic backgrounds. The other point of view states that ethnic differences should be promoted and incorporated into programs because children will benefit from living and learning in many different ways.

Because early day care was primarily custodial, regulations were stringent concerning the physical setting of the day care center and the health care regulations that must be followed within the center. This heavy emphasis on health care has continued, and today day care centers are attempting to provide comprehensive health care services to the children and families they serve. This comprehensive health care can and does include the services of doctors, dentists, social workers, psychologists, and dieticians.

Head Start had a strong commitment to the provision of nutritionally adequate meals, and the emerging day care programs are continuing this commitment. Many centers serve three meals and several snacks each day.

The organization and staffing of day care service will depend in part upon the needs and resources of various individual communities. State regulations do specify the experience and training needed for many staff positions. Persons contemplating the organization of a day care center should contact the child welfare office in the department of education in their state for information regarding the regulations which do exist in their state.

Early Childhood Education Program Descriptions

Behavior Analysis Program. The Behavior Analysis Program attempts to apply systematic reinforcement procedures to teach classroom skills which will enable children to complete successfully in traditional school situations. Both social and academic skills are reinforced.

Bushell uses tokens as a means of contingent reinforcement. Tokens have the advantage of rewarding a behavior without interrupting its occurrence. Children can exchange tokens at a later time for rewards or activities.

The number of tokens a child receives not only is indicative of his own efforts, but possibly is also an indication of amount of teacher attention being paid to the child. Teachers use programmed instructional materials to maximize each child's individual learning style and to monitor each child's progress closely.

Donald Bushell
University of Kansas

Engelmann-Becker Program. Originally based at the University of Illinois and known as the Bereiter-Engelmann Program, this approach to early childhood education is unique in its conception of the best way to help a deprived child. Deprived children lack the skills which would allow them to succeed in traditional school settings. The Engelmann-Becker program uses a fast-paced format with rapid cycles and frequent repetition and rules for systematic reinforcement to sustain attention.

This accelerated approach to academic skill learning is an attempt to allow deprived children to "catch-up" and succeed when they enter traditional programs.

Siegfried Engelmann
Wesley C. Becker
University of Oregon

Primary Education Project (PEP). The curriculum materials used in the PEP program constitute a carefully sequenced hierarchy of skills which controls the presentation of all prerequisite skills for any given new skill. Extensive testing is used for diagnostic, evaluative and progress report purposes.

The teacher serves as a reinforcer, always using the least powerful, effective reinforcer. Teachers also evaluate testing results and prescribe new materials. The programs allow children to work and progress at individual rates.

Lauren Resnick
University of Pittsburgh

Responsive Model. The responsive program model provides a classroom environment that allows the child to explore and learn by doing. O. K. Moore's programed Talking Typewriter is used to provide opportunities for reading and writing.

During the autotelic or self-rewarding activities available in this responsive program model, each child is encouraged to solve problems and learn how to learn. Teachers respond to the child's interests and initiatives; they guide and aide the child rather than instruct or teach him.

Self-concept is viewed as extremely important and the abundant use of materials and activities which provide positive feedback fosters development.

Glen Nimnicht
Far West Laboratory for
Research and Development

Cognitively-Oriented Program. The cognitively-oriented program is concerned with three major areas: the curriculum, the teacher, and the home. The cognitively-oriented curriculum is an attempt to apply Piaget's principles of child development in an educational setting.

Teachers are encouraged to design their own programs and to take major responsibility for program goals and methods using the supervising staff as resources. Weikart instituted regular home training sessions to develop confidence and competence in mothers' abilities to teach their children and to promote links between home and school experiences.

David Weikart
Ypsilanti, Michigan

Head Start. The early Head Start programs were basically modified or adapted versions of the Bank Street program. Prior to Head Start, nursery schools had long been concerned with children's self-concepts and their social-emotional growth. Hampered by last-minute funding, the early Head Start programs had little opportunity initially to design radically new approaches to early childhood education.

Bank Street. The Bank Street Program strongly reflects the principle that the integrated evelopment of the whole child is important. All aspects of child development and personality are viewed as equally influential.

The teacher is the primary force and influence in the program. It is she who plans, guides, and evaluates the child's growth and needs. Play is the child's tool for learning, and materials and activities are provided to encourage and stimulate children's play.

Elizabeth Gilkeson
Herbert Zimiles
Bank Street College of Education
New York

Montessori. Montessori programs are characterized by family grouping of children, active involvement through motor and sensory activities, and self-selection and self-correctional materials.

The Montessori program is extremely child-centered; the teacher serves as a provider and observer. Montessori materials stimulate children to practice skills they need for every day activities such as buttoning, zippering, preparing food, and discriminating shapes and sizes. Materials are graduated, sequenced, and used in a prescribed manner.

Maria Montessori
American Montessori Academy

Parent Education Program. Description and bibliography for this program can be found in Chapter 28, Parent Education.

Ira Gordon
Gainesville, Florida

British Infant School. Description and bibliography for this program can be found in Chapter 16, Open Education.

Summary

1. Day Care's role is changing from that of a custodial service to an organized learning environment for preschool children. It may also offer health services to its participants.
2. Individual day care centers reflect a number of early childhood programs including:
    a. Behavior Analysis Program
    b. Englemann-Becker Program
    c. Primary Education Program
    d. Responsive Model
    e. Cognitively Oriented Program
    f. Head Start
    g. Bank Street
    h. Montessori
    i. Parent Education Program
    j. British Infant School

REFERENCES

Chapter 29

Day Care – Theory

AHLFELD, K. Pressure cooker teaching: How it's working out. *The Nation's Schools*, 1969, 82, 58-62.

Alternatives in Quality Child Care: A Guide for Thinking and Planning. DCCDCA, 1972.

AXELROD, P. G. and TRAGER, N. Directing a day care center. *Children Today*, 1972, 1, 29-32.

BARATZ, S. S. and BARATZ, J. C. Early childhood intervention: The social science base of institutional racism. *Harvard Educational Review*, 1970, 40, 29-50.

BEREITER, C. Instructional planning in early compensatory education. *Phi Delta Kappan*, 1967, 48, 355-356.

BEREITER, C. and ENGELMANN, S. *Teaching the disadvantaged child in the preschool*. Englewood Cliffs, N.J.: Prentice-Hall, 1966.

BIBER, B. Educational needs of young deprived children. *Childhood Education*, 1967, 44.

BIBER, B. Emotional needs of young deprived children. *Education Digest*, 1968, 33, 15-18.

BIBER, B. The impact of deprivation on young children. *Childhood Education*, 1967, 44, 110-116.

BIBER, B., SHAPIRO, E., WICKENS, D. and GILKESON, E. *Prompting cognitive growth: A developmental-interaction point of view.* Washington, D.C.: NAEYC, 1971. Englewood Cliffs, N.J.: Prentice-Hall, 1972, 255-271.

BLAKE, M. E. (Ed.). *Day care aides. A guide for inservice training.* New York: National Federation of Settlements and Neighborhood Centers, 1968.

BOGUSLAWSKI, D. B. *Guide for establishing and operating day care centers for young children.* New York: Child Welfare League of America, 1966.

BRAZZIEL, W. F. Two years of Head Start. *Phi Delta Kappan*, 1967, 48, 345-348.

BURNETT, A. Montessori education today and yesterday. *Elementary School Journal*, 1962, 63, 71-77.

Care and education of young children. Reprinted from *Child Care in Massachusetts, The Public Responsibility*. DCCDCA, 1972.

CALDWELL, B. M. Day care: Pariah to prodigy. *AACTE Bulletin*, 1971, 24, 1-6.

CHILD DEVELOPMENT STAFF. *Programs for infants and young children, Part 1: Education and day care*. Washington, D.C.: Appalachian Regional Commission, 1970.

CICIRELLI, V. G., EVANS, J. W. and SCHILLO, J. S. The impact of Head Start: A reply to the report analysis. *Harvard Educational Review*, 1970, 40, 105-129.

COHEN, D. J., PARKER, R. K., HOST, M. S. and RICHARDS, C. (Eds.). *Day Care: 4, Serving school children*. Department of Health, Education and Welfare; Office of Child Development, 1972, DHEW Publication No. (OCD) 72-34.

CRITTENDEN, B. S. A critique of the Bereiter-Engelmann preschool program. *School Review*, 1970, 78, 145-167.

Day care: 1, A statement of principles. Department of Health, Education and Welfare; Office of Child Development, 1971, DHEW Publication No. (OCD) No. 72-10.

Day care: 8, Serving children with special needs. Department of Health, Education and Welfare; Office of Child Development, 1972, DHEW Publication No. (OCD) 72-42.

DEMONSTRATION SCHOOL — BANK STREET. *Grade Teacher*, 1969, 87, 56-57.

DOBBIN, J. E. Strategies and innovations demonstrated in Project Head Start. *Journal of School Psychology*, 1966, 4, 9-14.

ELKIND, D. Piaget's conservation concept. *Childhood Education*, 1968, 44.

ENGELMANN, S. *Preventing failure in primary grades*. Chicago, Illinois: Science Research Associates, 1969.

EVANS, E. D. *Contemporary influences in early childhood education*. New York: Holt, Rinehart and Winston, Inc., 1971.

FARRELL, M. A. Language development: A Piaget approach. *School Report*, 1970, 78, 169-183.

FISHER, C. *The Montessori manual for parents and teachers*. Cambridge, Massachusetts: Robert Bentley, 1964.

GROTBERG, E. H. (Ed.). *Day care: Resources for decisions*. OEO Pamphlet 6106-1, June 1971.

HARRELL, J. A. (Ed.). *Selected readings in the issues of day care*. DCCDA, 1972.

HELLMUTH, J. (Ed.). *The disadvantaged child*. Vol. II, Seattle: Special Child Publications, 1968.

HONIG, A. *Infant development: Problems in intervention*. DCCDCA, 1972.

HOST, M. S. and HELLER, P. B. *Day care: 7, Administration*. Department of Health, Education and Welfare: Office of Child Development, 1971, DHEW Publication No. (OCD) 72-20.

HUNTINGTON, D. S., PROVINCE, S. and PARKER, R. K. (Eds.). *Day care: 2, Serving infants*. Department of Health, Education and Welfare; Office of Child Development, 1972, DHEW Publication No. (OCD) 72-78.

MACCOBY, E. E. and ZELLNER, M. *Experiments in primary education*. New York: Harcourt Brace and Jovanovich, Inc., 1970.

MARTIN, T. Have you considered typing? *Instructor*, 1969, 78, 20.

McAFEE, O., NIMNICHT, G. and MEIER, J. *The new nursery school: Learning activities I, II, III and IV*. New York: General Learning Corporation, 1969.

MONTESSORI, M. *The absorbent mind*. New York: Holt, Rinehart and Winston, 1967.

MONTESSORI, M. *The Montessori method*. New York: Schocken Books, 1964.

MOSKOVITZ, S. Some assumptions underlying the Bereiter approach. *Young Children*. 24, 1968, 24-31.

NIMNICHT, G., McAFEE, O. and MEIER, J. *The new nursery school*. New York: General Learning Corporation, 1969.

NIMNICHT, G. Low cost typewriter approach helps preschoolers type words and stories. *Nation's Schools*, 1967, 80, 34-37.

NORTH, A. F. *Day care: 6, Health service*. Department of Health, Education and Welfare: Office of Child Development, 1971, DHEW Publication No. (OCD) 72-74.

PARKER, R. K. and DITTMAN, L. L. (Eds.). *Day care: 5, Staff training*. Department of Health, Education and Welfare; Office of Child Development, 1971, DHEW Publication No. (OCD) 72-73.

PHI DELTA KAPPAN. Intellectual pressure cooker – A report on Bereiter's school. *Phi Delta Kappan*, 48, 1967, 357-359.

PRESCOTT, E., JONES, E. and KRITCHEVSKY, S. *Day care as a child-rearing environment*. Volume II, Washington, D.C.: NAEYC, 1972.

RAMBUSCH, N. *Learning how to learn: An American approach to Montessori*. Baltimore: Hilicon Press, 1962.

SMITH, M. S. and BISSELL, J. S. Report analysis: The impact of Head Start. *Harvard Educational Review*, 1970, 40, 51-104.

STENDLER, C. The Montessori method. *Educational Forum*, 1965, 29, 431-435.

Vital Headstart in Ypsilanti. *Michigan Educational Journal*, 1969, 46, 47.

WEBER, E. Forces for change in early childhood education. *Contemporary Education*, 1969, 40, 138-141.

WEIKART, D., ROGERS, L., ADCOCK, C. and McCLELLAND, D. *The cognitively oriented curriculum*. Washington, D.C.: NAEYC, 1971.

WEIKART, D. P. *Perry Preschool Project, Ypsilanti, Michigan*. Washington, D.C.: U.S. Government Printing Office, 1969.

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CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV V VI VII VIII Day Care IX X

CHAPTER 29. DAY CARE THEORY

CHAPTER 30. DAY CARE APPLICATION includes a case study to provide practice for the teacher in designing classroom areas, planning appropriate activities, and handling administrative duties.

CHAPTER THIRTY

DAY CARE – APPLICATION

Day Care – Application is an extended case study intended to simulate many of the activities with which persons working in day care centers will need to be familiar. These activities were not chosen to be representative of any one staff position, but rather to be a sample of what day care staff members in many roles will do during the course of the day. The children used in the examples in this case study are 8 months, 14 months, and 2 ½ years old.

The case study exercise provides practice in:

1. designing a classroom with areas for block building, books, dramatic play and quiet activity.
2. planning appropriate activities for three children in each of the classroom areas.
3. handling administration duties including scheduling, ordering supplies and meal preparation.

Plate 30.1

NOTES ON ACTIVITIES

Image

A.

B.

C.

D.

E.

Image

F.

G.

H.

I.

J.

Image

K.

L.

M.

N.

O.

Plate 30.2

RESOURCE ORGANIZATIONS ON DAY CARE

The Child Welfare League of America, Incorporated
44 East Twenty-third Street, Ninth Floor
New York, New York 10010
Telephone: 212-254-7410

Day Care and Child Development Council of America
1426 H Street, N.W., Suite 340
Washington, D. C. 20005
Telephone: 202-638-2316

National Association for the Education of Young Children
1834 Connecticut Avenue, N.W.
Washington, D. C. 20009

Association for Childhood Education International
3615 Wisconsin Avenue, N.W.
Washington, D. C. 20016
Telephone: 202-363-6963

Elementary, Kindergarten and Nursery Education
National Education Association
1201 16th Street, N.W.
Washington, D. C.
Telephone: 202-833-4390

REFERENCES

Chapter 30

Day Care – Application

Refer to References for Chapter 29.

PART X

SUMMARY

CARE 2/3 - DIAGNOSTIC TEACHING OF PRESCHOOL & PRIMARY CHILDREN

I II III IV V VI VII VIII IX Summary X

CHAPTER 31. SUMMARY OF CARE 2/3

CHAPTER THIRTY-ONE

SUMMARY OF CARE 2/3

The Diagnostic Teaching Model is the core of CARE 2/3. Diagnostic Teaching, a method for individualizing instruction, enables the teacher to prevent the development of potential learning problems, to correct existing learning problems, and to enhance learning assets. The model presents a scheme for planning, carrying out, and evaluating a program of diagnostic teaching.

However, before a teacher can properly apply the model, he needs to know the stages of development through which a child normally progresses. Chapters on the motor, intellectual, social-emotional, and language development of children have provided the teacher with descriptive information concerning the normative behavior and changes in behavior of preschool and primary children. These changes, which are described in terms of development, individual differences, differentiation and socialization, are the conceptual tools the teacher needs to be a better judge of whether or not a particular behavior he observed in his classroom is appropriate for a child of that age and, in turn, whether or not the child requires special attention.

To facilitate this judgment process, the areas of instructional procedures and evaluation have been explored and the teacher has learned how to determine if and when the child has reached his prescribed goals. By being exposed to the principles of Open Education and Behavior Modification, the teacher may have concluded that the preparation of these goals is an activity to be shared with the student.

Though the goal of the Diagnostic Teaching Model and this course is to prepare the teacher to handle individual differences in the classroom, it recognizes that there are some situations that the teacher alone will be unable to remedy. Thus, the course has described a variety of resource persons and programs that the teacher may refer to when the facilities within the classroom have been proven inadequate.